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Academic choice provision in an urban elementary school classroom : an examination of the factors and processes that lead to growth in teaching and learning.

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ACADEMIC CHOICE PROVISION IN AN URBAN ELEMENTARY SCHOOL CLASSROOM: AN EXAMINATION OF THE FACTORS AND PROCESSES THAT LEAD TO GROWTH IN TEACHING AND LEARNING

A Dissertation Presented

by

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DEDICATION

To those public school teachers who continue to seek ways to bring joy and personal meaning to children's days in school despite pressures that make this increasingly difficult.

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I would like to thank my advisor, Patt S. Dodds for her wise guidance and insights throughout the process of conducting and writing about this study. She helped me to see the positive aspects of seemingly difficult moments and made our meetings a pleasure. I would also like to thank the members of my committee, Joyce A. Berkman and Linda L. Griffin for their support, and their great questions and suggestions. Their thoughtful attention is deeply appreciated.

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My colleagues at the Northeast Foundation for Children have supported me and the work of this study in many ways. They have given me support and time to do the work and they have developed a practical approach to providing academic choices in elementary schools that provided a basic framework for the work that Ann and I did together. I am deeply grateful to all of them.

ABSTRACT

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Researchers, theoreticians, and teacher educators often treat the strategy of providing students with choices related to their curriculum as a simple one and individual studies generally consider only a few variables. In practice choice provision is a complex strategy that cannot be isolated from the institutional and instructional contexts within which it is utilized and many teachers do not use it well or often. This dissertation describes an analytical action research case study designed to provide a holistic, in-depth examiniation of the contexts, processes, structures, and outcomes of academic choice provision for a fourth grade teacher, Ann, and her students as they developed their use of this strategy over one school year. In order to address practical problems of choice provision as they arose and to support the teacher in her development of expertise with this strategy, the researcher worked as a supporter and facilitator for the teacher and structured interactions with her based upon Stringer's (1999) look, think, act cycle for action research. This process was documented through classroom observations, interviews with the teacher and students, and collection of documents. Data were analyzed using Strauss and Corbin's (1998) methods for developing grounded theory. An inter-related set of contextual factors influenced the nature of Ann's work and its outcomes as well as her interpretations of key concepts related to academic choice provision. These factors included (a) time pressures, (b) high stakes testing, (c) required curricula, (d) students' prior knowledge, and (e) teacher support. Ann's development of academic choice was characterized by her efforts to find and enact an optimal balance between student and teacher input into the curriculum within contextual pressures that worked both for and against such

a balance. Within this central theme Ann grappled with (a) treating academic choice as peripheral versus integral to the curriculum, (b) focusing on student products versus student learning processes, and (c) nurturing student dependence versus independence. Choice provision was associated with a high degree of student engagement including enjoyment, on task behavior, and increased individual initiative.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION TO THE STUDY

This dissertation describes an analytical case study designed to provide a holistic, in-depth examination of the contexts, processes, structures, and outcomes of academic choice provision for a fourth grade teacher and her students as they develop in their use of the strategy over the course of a school year. As an analytical study, it goes beyond description to identify underlying patterns in the data. For the purposes of this study, the term *academic choice* is defined as the act or opportunity of selecting among two or more options or actions relating to either the content of curriculum, the processes of curriculum, or both.

Though many positive outcomes for providing academic choices to students are cited in literature for practitioners as well as in research, its actual use and effectiveness in schools is inconsistent at best. This may be because choice provision, simple in concept, is actually quite complex in practice. A myriad of inter-related psychological, social, and environmental factors affec its implementation.. The findings of this study may help teachers and teacher educators identify and address factors that affect the frequency, quality, and outcomes of academic choice provision.

Background of the Study

Current Trends

Among the best-known promoters of approaches to teaching that highlight or incorporate student choice are Calkins (1986) Charney (1991/2002), Fountas and Pinnell (1996), Glasser (1988), Kamii (1991), Kohn (1993), Tomlinson (2000), and Wolk (1998; 2001). This movement is made up of many professional educators operating under many different organizational approaches, some of which are named and set apart, and some of which are not. They operate on the belief that "Students learn best when they are deeply engaged" (Levine, 2002, p. 29). Most of the more student-centered approaches to education incorporate some degree of student choice as an essential ingredient to a personally meaningful and engaging curriculum.

Evidence of the trend to promote choices for students as a part of good educational practice is plentiful. As an elementary school teacher and teacher educator, many examples of both specific

curricula and general approaches to teaching currently in practice in schools are familiar to me. These approaches include whole language, writing process and balanced literacy, constructivist science and mathematics, inquiry-based and project-based learning, and authentic assessment. Learning centers (choice of learning activities) and general choice times are in use in many kindergarten classrooms, and occasionally first and second grades as well. Having students choose a sub-topic (such as for individual research) and reporting within a larger topic area (such as animals) is a common practice of teachers from kindergarten (e.g. Barclay & Breheny, 1994) to high school (e.g. Garland, 1995).

Often, those teachers who advocate student choice set up many choices within each school day. They adhere to the contention, based in cognitive developmental theory, that children construct knowledge through initiation of active learning via interaction with concrete aspects of their environment. This initiative promotes engagement in experiences that further their purpose, followed by reflection on those experiences. Reflection leads to further initiation of new experiences (Hohmann & Weikart, 2002). This entire cycle represents a pattern of learning that teachers use to structure choice experiences for their students. One common structure utilizing this pattern is *choice time* - a time set aside when students can select from a wide variety of materials to pursue their own ideas and goals with whomever else in the class they wish.

Another approach provides choices of activities pertaining to specific learning objectives within units or lessons in each subject area, or within integrated thematic units. Educators using these methods include, among many others, practitioners of the High/Scope methods (Vogel, 2001), Responsive Classroom® teachers (Charney, 1991/2002; Clayton, et al., 1997), those at a still operating open classroom school (Dunn, 2000), those who teach in multi-age classrooms (Chase & Doan, 1996), and a great many kindergarten teachers (e.g. Barclay & Breheny, 1994; Meier, 1994).

Although there is much variety as to the details of how choice is carried out in such different settings, these broad approaches to choice tend to share certain common structures that delineate and enhance natural patterns of learning. Some ritualized format for planning for choices is included. A teacher may introduce and discuss available choices and then have students report orally what they will do. Alternatively, a teacher may have students make more formal written plans. Often, teachers

also involve some sort of student presentation of completed work to others and some form of structured student reflection and self-assessment. The High/Scope program, which was initially designed to address issues of extremely low success rates in schools of poor minority populations in Ypsilanti, Michigan, calls this the *Plan - Do - Review* process, and it is a central aspect of their pedagogical approach (Vogel, 2001). Strongly influenced by High/Scope Foundation's methods of structuring choices for early childhood classrooms, The Responsive Classroom® approach evolved a similar model of student academic choice at the elementary level, naming the processes *planning, working, and reflecting* (Clayton, Charney, Wood, Porter, & Bechtel, 2003).

Claims About the Benefits of Academic Choice

Conceptual literature promoting student academic choice demonstrates that the actual manner of including choices in curricula varies widely, but educators who regularly utilize choice as a strategy are convinced that it has a broad range of important benefits. These benefits include (a) higher attendance and graduation rates (Levine, 2002) (b) increased responsibility and preparation for participation in a democratic society (Starnes & Paris, 2000), (c) greater equity of opportunity to learn for students with a wide range of backgrounds, skills, learning styles and interests (Silver, Strong & Perini, 2000), (d) enhanced cognitive development and independent thinking (Barclay & Breheny, 1994; Chase & Doan, 1996; Charney 1991/2002; Clayton, Charney, & Wood, 1997; Dunn, 2000; Hohman & Weikart, 2002; Kamii, 1991; Vogel, 2001), and (e) greater engagement and joy in learning (Glasser, 1988; Jenson, 1998 Whalen & Csikszentmihalyi, 1991).

Higher Attendance and Graduation Rates

The Met School is a public high school with a diverse student body in Providence, Rhode Island. There, students in collaboration with adult advisors develop a personalized curriculum that meets general school-wide and state-wide learning goals and grade-level activity requirements (Levine, 2002). Within a supportive structure and clear guidelines, students have broad choices of topics, types of activities, ways of gaining information, and ways of demonstrating their learning. Its promoters claim that this practice along with strong relationships among students and faculty results

in one-third the absentee and drop-out rates and one-eighteenth the suspension rate of other public high schools in Providence. Every student has been accepted into college

In Rochester, New York, the city school district has created a program called Pathways to School Success that allows high school students along with their parents to choose how many years they will spend in high school (Janey, 2002). They may undertake a program of study that leads to graduation in either 3, 4, or 5 years. As with the school in Providence, educators in Rochester claim that the dropout rate is reduced and more students attend college than otherwise would have as a result of being given this choice.

Increased Responsibility and Preparation for Participation in a Democratic Society

The Foxfire approach relies heavily on student choice (Starnes & Paris, 2000). Like the Met School, teachers utilizing Foxfire are expected to set high and clear expectations for academic goals and skills, then support students to devise an inquiry and a method of reporting learning that is of interest to them. Within this model, teachers and students are understood to share responsibility. Students make choices with clear guidelines and feedback from teachers. This exercise is said to result in increased levels of personal responsibility, active participation in society and social and emotional growth, as well as greater academic accomplishment for students.

For the same reasons as Foxfire, promoters of democratic classrooms frequently cite student choice as an important mechanism for teaching students to live in and contribute to a democratic society. Steven Wolk (1998) relates the use of student choice to constructivist learning theory as he makes a case for democratic classrooms at the elementary level in which students have time each day to work on a project of their own choice, as well as other, smaller choices within the teacher planned curriculum.

Educator Rahima Wade (2001), considering the ideal social studies curriculum, claims that

> At the heart of democratic student education are student voice and choice…Student choice is a central feature, with students making decisions about topics to study, due dates for assignments, and the processes for creating an optimal learning environment. (p. 25)

Greater Equity of Learning Opportunities for Students With a Wide Range of Backgrounds, Skills, Learning Styles, and Interests

Howard Gardner's (1983) theory of multiple intelligences is now well known by many educators. Claiming that there are eight different types of intelligence or ways of approaching and understanding the world, advocates of this theory believe that schools should provide many avenues to meet learning goals. These include logical-mathematical, linguistic, musical, spatial, bodily-kinesthetic, natural world, interpersonal, and intra-personal orientations. Student choice can be one way of both supporting students to discover and utilize their particular intellectual strengths and of organizing and scheduling student work in such a variety of activities (Silver et al., 2000).

A particular approach named *differentiated instruction* develops this concept as a set of specific practical applications (Tomlinson, 1999). Teachers begin by learning about their students so they can teach according to each individual's needs and strengths in relation to the required curriculum. They assume that people learn best in different ways and rates and teachers must be prepared to instruct students in different ways within the same classroom. Providing choices from a range of teacher developed activities is one of many ways described by promoters of differentiated instruction to accomplish optimal learning for all students.

Enhanced Cognitive Development and Independent Thinking

Constance Kamii (1991), a prominent proponent of constructivist education, makes a case for the importance of choice in the development of cognition. To enter Piaget's advanced cognitive developmental level of formal operations one must be able to think for oneself - to generate knowledge, discern truth from untruth, and form logical opinions based upon independent assessment of information regardless of reward or punishment. She distinguishes the *right* to make decisions from the *ability* to make decisions, which must be developed through experience. Intellectual autonomy, she asserts, is a cognitive capacity that is learned:

> Children can learn to make choices only by making their own decisions and evaluating the results of their decisions. We cannot expect children to accept ready-made values and truth all the way though school, and then suddenly make choices in adulthood. (Kamii, 1991, p. 38)

Greater Engagement and Joy in Learning

The claim that academic choices lead to greater student engagement and pleasure is ubiquitous in the articles, books and programs that incorporate choice. When students are able to have input into important aspects of what they will learn, how they will learn it, or even when, where, how well or how much they will learn, they are perceived to have more fun, are more willing to take the risks necessary to learn, and become more personally involved and committed to learning. Perhaps this rationale is most directly explained by Jenson (1998), proponent of brain compatible approaches to learning. According to research on the brain and learning, positive emotions contribute powerfully to a state of mind that is optimally open for learning. In addition, people are more likely to remember information that is emotionally laden. Regular opportunities for student choice, says Jenson, are one way to foster positive emotional associations with learning.

Glasser (1998) promotes a similar rationale for providing regular choices to students, but from a psychological rather than biological orientation. We all have five basic needs that we are intrinsically motivated to satisfy, he states, including needs for power and freedom (p. 28). In a school setting these needs can be met by providing meaningful choices to students. He advocates a cooperative *Learning-Team Model* (Glasser, 1988) that allows a great deal of structured student input about their program of study as ideal for providing choice opportunities, as well as other experiences that will satisfy students' emotional and psychological needs and, therefore, promote optimal learning.

Research-Based Knowledge About Academic Choice Provision

Research-based student outcomes related to academic choice provision include increased positive affect and task engagement (Edwards & Juliebo, 1989; Garland, 1995; Linn, Chen, & Their, 1977; McPhail, 2000; Rainey, 1965; Rice & Linn, 1978; Stanne, 1999; Turner, 1995), and higher rates of intrinsic motivation for academic tasks (Condon & Collier, 2002; Cordova & Lepper, 1996; Eriksson, 1990; Fisher, Blackwell, Garcia, & Greene, 1975; Iyengar & Lepper, 1999; Prusak, 2000). Student choice has also been associated with improved student performance related to academic skills and processes including (a) problem-solving and critical thinking (Cordova & Lepper, 1996; George, 1977; Iyengar & Lepper, 1999; Linn et al. 1977; Rice & Linn, 1978), (b) creativity (Amabile &

Gitomer, 1984; Eriksson, 1990), (c) greater use of a variety of reading strategies (Turner, 1995), (d) greater persistence in the face of difficulty (Turner, 1995), greater likelihood of setting learning goals as opposed to performance goals (Turner, 1995), and (e) more self-initiated revision and editing of work (Glessner, 1997).

Results concerning academic achievement in terms of mastery of content have been mixed. Some researchers have found that students provided choices score higher on assessments of related content than those not given choices (Berk, 1976; Cosden, Gannon, & Haring, 1995; Howard & Howard, 1997; Iyengar & Lepper, 1999; Moes, 1998; Schweinhart, 2001), whereas others found no differences between groups (Barry, Neilsen, Glassnap, Poggio & Sundbye, 1997; Cordova & Lepper, 1996; Dyer, Dunlap, & Winterling, 1990; George, 1977; James, 1995).

Choice provision appears to promote better behavior in students who tend to exhibit problem behaviors (Dunlap, Clarke, & Robbins, 1991; Dunlap, et al., 1994; Dyer, et al., 1990; Jervis, 1986; Moes, 1998; Peterson, Caniglia, & Royster, 2001; Powell & Nelson, 1997; Umbreit & Kwang-Sun, 1996; Vaughn & Horner, 1997) and it has also been associated with increased positive interactions and friendships among students (Condon & Collier, 2002; Donohue, 2000; Jervis, 1986).

Problem Statement

The body of research in choice provision is not well developed and many gaps exist. There has been no systematic look at all the types of and contexts for academic choices and the relationships among those factors and the outcomes of choice for students. Among those factors, the processes whereby teachers grow and change in their understandings and skills in using choices to teach, and the ways in which students develop over time in their abilities to use choices to learn may be among the most central to teacher educators.

Problems With Academic Choice Provision in Practice

Teachers have cited pressures from administrators, parents, standardized testing, and required curricula as obstacles to academic choice provision (Denton, 2003; Garcia-Gonzalez, 2000; Glessner, 1997; Heweker-Hoy, 1998; Yamzon, 1999). In one prior study (Denton, 2003), I found that many teachers testifed to positive experiences with application of student choice strategies, but many also

seemed to be convinced that providing choices, although pleasant, worked directly against student academic achievement as measured by standardized test scores and required curricula. Teachers said there was not enough time to teach all the required content. Direct instruction of the information that must be taught apparently seemed more time efficient, if not more conducive to learning. Other research has indicated that when teachers feel such a lack of choices in their approach to curriculum and instruction, they are likely to pass this pressure and lack of choice along to their students (Deci & Spiegel, 1982; Ferree, 1997; Garcia-Gonzalez, 2000; Pelletier, Sequin-Levesque, & Legault, 2002; Yamzon, 1999). Teacher educators need more information about the contextual factors that teachers believe to present obstacles to choice provision in schools and how they may best be addressed. Are the obstacles such as required curricula that are cited by teachers truly impediments? If so, can they be overcome? Without such information, it is difficult for those who promote the use of student choices to know how best to support teachers' growth in this area.

In addition to teachers' perceptions of obstacles to implementing student choice, various aspects of teachers' perceptions have not been widely considered, and these may contribute to teachers' discomfort with academic choice provision. An important facet of choice provision that is generally disregarded by researchers, curriculum developers, and teacher educators is that of the teacher's understanding of concepts central to effective implementation of academic choices. Although teachers generally agree that choices lead to greater student motivation and engagement in learning, different teachers seem to hold different ideas about what such concepts mean in practice (Johnston, 1985). Teachers hold varying understandings of other concepts central to choice provision, such as the nature of student interests, learning, and curriculum (Bussis, Chittenden, & Amarel, 1976; Johnston, 1989), empowerment (Denton, 2003), individualized instruction (Johnston, 1989), and the role of choices in learning (Bussis et al., 1976; Denton, 2003; Johnston, 1989). Based on available research, it seems that for the majority of teachers, student input and choice is not understood to be an important aspect of learning. Many teachers believe that student choices, although fun and engaging for students, are a distraction from learning important content rather than a facilitator of learning (Bussis et al., 1976; Denton, 2003; Johnston, 1989).

Although educational theories and supporting research point to the importance of incorporating student choice into instruction, curricula and programs that call for its use rarely highlight it as a specific strategy that must be learned, understood, and practiced in its own right. Curriculum guides advise that certain lessons include choices or that certain days of instruction be devoted to student choice with the apparent assumption that this is a strategy that teachers understand and have mastered (e.g. Battista et al., 1997; Fountas & Pinnell, 1996; Silver et al., 2000).

One approach to teaching practice called The Responsive Classroom® (Charney, 1991/2002; Clayton, Charney, & Wood, 1997) does provide specific instruction and support in the use of structured student choice as a separate teaching strategy that can be applied to many lessons and curricula. Use of student choices in academic instruction is broken into three distinct phases: (a) planning, (b) working, and (c) reflecting. Teachers are instructed in the theory behind the uses of academic choices and provided models, interactive first-hand experiences, and practical examples and ideas for classroom applications as one part of a one-week summer institute. Despite such instruction, the obstacles to academic choice provision that teachers cite and the understandings they hold about it do not change enough for many of them to be prepared to use it successfully in their classrooms (Denton, 2003). Teachers' difficulties with transferring knowledge gained through instruction have been documented by research (Bell & Gilbert, 1994; Joyce & Showers, 1995; Veenman & Raemakers, 1995). In a study of teachers' views on what most supported their professional development, formal training sessions ranked low, whereas practical experience and conversations with colleagues ranked high (Watts, 1986). Teachers do not necessarily feel able to effectively implement knowledge gained from inservice trainings in their daily practice without additional ongoing support (Bell & Gilbert, 1994).

In addition to instruction in new approaches, teachers apparently need assistance as they begin implementation in a way that makes sense to them, and as they develop understanding and more sophisticated strategies through regular practice (Darling-Hammond & McLaughlin, 1995; Joyce & Showers, 1995). Researchers have found that for new ideas and skills to become an integral part of teachers' practice, they may need ongoing interactions with other supportive professionals, such as

colleagues, supervisors, or action researchers who can provide feedback, coaching, and opportunities for structured reflection. All of these activities are associated with increased rates of transfer of new learning to teachers' daily practice (Bell & Gilbert, 1994; Darling-Hammond & McLaughlin, 1995; Joyce & Showers, 1995; Veenman & Raemakers, 1995; Wood & Thompson, 1993). It is likely that such practices would increase teachers' use of student choice as a strategy, but researchers have not yet directly examined the steps and processes whereby teachers gain expertise in the use of choice provision as a regular part of their practice.

Problems With Research Design

Because of the complexity of academic choice provision, the isolation of student choice as a factor in the research outcomes is particularly difficult. None of the positivist researchers have succeeded in this effort, though some have come closer than others. Researchers undertaking interpretive studies do not attempt to isolate choice as a variable, but they too have fallen short in fully describing the factors and relationships that influence its use and outcomes. For example, both positivist and interpretive researchers considered some type of student selection in regard to academic activities, but the similarities among the studies end with that simple attribute.

There was a wide variety in the types of choices provided and the relevant contextual factors considered in research designs, outcomes, or both. (See Chapter 2 for greater detail.) Types of choices ranged from very narrow ones, such as the choice between two mathematics worksheets (Coniglio, 2000), or markers to use to complete a worksheet (Moes, 1998), to very broad ones that incorporate many smaller choices such as the choice of a topic of study (e.g., Garland, 1995), resources to use for learning (e.g., Eriksson, 1990), and which science experiment to conduct and how to go about conducting it (e.g., Rice & Linn, 1978). Some studies considered the effects of whole approaches, such as open classrooms, with many and varied, but unspecified, types of student choice identified as a central characteristic (e.g., Allman-Snyder, May, & Garcia, 1975; Donohue, 2000). These researchers did not specify reasons for studying particular types of choices and excluding other types.

With the exception of one very recently published study involving college students (Reeve, Nix, & Hamm, 2003), few researchers recognize the range of types of academic choices, or that the

type of choice provided may influence outcomes. Additionally, no researcher has attempted to develop or address a comprehensive list of the diverse contextual factors that influence implementation and outcomes of student choices. Only a very few contextual factors have been addressed in any one study, and these vary widely. For example, one group of researchers directly considered the relationship between fostering personal relevance for students and the impact of academic choices (Assor, Kaplan, & Roth, 2002). One researcher asked how outcomes for students with regular experiences with choice provision in the past compared to those with little or no past experiences with choices in school (Blackwell, 1974). Other factors considered by different groups of researchers included, among others, the number of options offered (Iyengar & Lepper, 2000), the ethnic background of students (Iyengar & Lepper, 1999), and the effects of teacher attention (Umbreit & Kwang-Sun, 1996).

Contextual factors that were considered offer some clues as to the complex nature of choice provision in schools. Other potentially influential factors that no researcher has yet considered may be identified as well. For example, what effects will the system of evaluating choice work have upon its delivery and results? How important is the quality of the relationships between a teacher and his or her students, or between students in a classroom? What are the different roles teachers might play as students undertake choices and how do those roles impact outcomes? Do students' responses to choices change with regular opportunities to make them and then reflect upon them over a period of time? How do teachers' understandings of certain key concepts influence what types of choices they do and do not provide and the success of those choices?

A qualitative examination of the implementation and outcomes of choice provision in a classroom over time with a focus on identifying many factors and the relationships among them is needed as a first step toward identifying and addressing the possible types and factors that shape academic choice provision in the field. Answers to questions such as these could provide a basis for the initial development of a conceptual framework for choice provision in school settings. Such a framework might guide researchers in such a way that studies of choice provision could build upon each other in a more systematic manner than is currently the case. It could also guide teachers and

teacher educators who would like to incorporate academic choice provision as an effective strategy for learning.

Purposes of This Study

The purposes of this study were to (a) better understand the steps and processes whereby teachers develop increasing expertise in their use of academic choices, (b) explore relationships between a teacher's understanding of key concepts related to academic choice provision and types and contexts of choices, and (c) explore relationships between the apparent outcomes of academic choices for students and the types and contexts within which choices are provided. The following research questions guided my data collection and analysis:

1. What contextual factors most influence teacher and student use of academic choices?
2. To what extent does a teacher's implementation of academic choices change over time?
3. To what extent does a teacher progress in her understandings of key concepts related to choice provision as she progresses in her practice?
4. To what extent do academic choices affect student outcomes?

Significance of the Study

This study was significant because it provided the first holistic examination of academic choice in a natural setting that discovered more complete information about relevant delivery structures and contextual factors as well as the relationships between these and participants' development over time. This case study of one teacher and her students allows a more in-depth look at a variety of inter-related variables as they evolve over time and influence one another. It provides data that may support the development of a conceptual framework for the types and contextual factors relevant to choice provision as well as information about patterns in the relationships between such factors and student and teacher growth.

Theoretical Frameworks

Existing research on academic choices for students is based in a variety of theoretical frameworks, including primarily cognitive behavioral theory (e.g. Moes, 1998; Powell & Nelson, 1997), self-determination theory (Deci & Ryan, 1985), and cognitive developmental theories (e.g.

Piaget, 1923/1962; Dewey, 1938/1963). This study was based upon frameworks of self-determination theory and cognitive developmental theory.

Self-Determination Theory

Self-determination theory is concerned with the source and promotion of *intrinsic motivation* - "the innate, natural propensity to engage one's interests and exercise one's capabilities, and in so doing, to seek and conquer optimal challenges" (Deci & Ryan, 1985, p.43). In this conceptualization, people can be active participants in choosing and generating behavior - co-creators of experience rather than always simply respondents to experience.

Self-determination theory states that the opportunity to be self-governing enhances intrinsic motivation and denial of the opportunity to be self-governing decreases intrinsic motivation. If an individual has a sense of autonomy, of competence, and of relatedness to others, he or she feels a sense of self-governance. A sub-theory within self-determination theory is called organismic integration theory. It states that intrinsic motivation is the primary energizer of the developmental process (Deci & Ryan, 1985). If knowledge construction is to be active and self-paced, then intrinsic motivation is a necessary prerequisite. According to self-determination theory, provision of choices is one important vehicle for supporting a sense of autonomy, competence and relatedness and increasing intrinsic motivation.

In contrast, researchers using a cognitive behavioral framework are concerned with the goals of behavior, but individuals' goals are understood to be generated by physiological drives. Particular goals are set as a result of interactions with environmental stimuli that have become associated with drive fulfillment. Past experiences lead to associations that lead to certain expectations about future reinforcements. Student choice-making is understood to be an antecedent control technique (Powell & Nelson, 1997) or an antecedent intervention (Moes, 1998). Choice is imposed before the occurrence of the behaviors researchers and teachers hope to generate. Cognitive behaviorists seek stimulus-response sequences that will generate compliance with external expectations for students. This framework shares some of the same goals as the self-determination framework because choice is seen to be a "positive approach to behavior management … [that is] …respectful of a person's dignity"

(Dyer et al., 1990, p. 515). The focus, however, is upon extrinsic rather than intrinsic motivation and development.

Cognitive Developmental Theory

According to cognitive psychological theory, prior experiences combined with personal orientations and traits along with cultural influences lead to the development of individual practical knowledge and belief systems. These systems of thought influence people's perceptions and accompanying interpretations of new experiences, and their understanding and applications of new knowledge. Perceptions and understandings, in turn, direct behavior. A cognitive orientation assumes that understanding people's thoughts and beliefs is the key to understanding their behavior (Clark & Peterson, 1986).

To cognitive theory, developmental theory adds that people's cognitive structures are organized in a series of hierarchical stages. As we experience the world and process those experiences, our cognitive structures qualitatively change in a predictable sequence. The stage of cognitive growth predicts certain patterns of perceptions and understandings, which in turn direct behavior (Sprinthall & Thies-Sprinthall, 1983). Learning is viewed as a constructive process "more concerned with understandings achieved through relevant experience than with accumulated facts received from others, more imbued with meaning, more domain or situation specific, more influenced by social and cultural contexts..."(Black & Ammon, 1992).

Cognitive growth cannot be separated from its social and environmental contexts. Understandings are constructed out of interactions that promote reflection (Vygotsky, 1978). Growth occurs when a person experiences somewhat novel events and roles in an otherwise familiar and comfortable context, if the proportion of thoughtful reflection upon new experiences occurs in proportion to the experiences themselves (Glickman, 1985). This construction of knowledge is cyclical and must be self-paced. Reflection follows experience, and planning for the next experience follows reflection. This cycle of planning, practice, and reflection requires repetition over time for an individual to move into a more complex stage of cognitive development (Black & Ammon, 1992). New information can be delivered, and structures and limitations that support thinking can be

provided. This externally generated knowledge and structure must then be given context with practical experiences, social role-taking in which a person performs an interpersonal task that is somewhat more complex than comfortable, ongoing supervision, and support during times of disequilibrium, frustration, or confusion (Albertson, 1985). These strategies support cognitive development in both children and adults. For teachers, these criteria for development can be met through collaborative research (Oja, 1990). For students, well-structured choice provision provides similar conditions for self-initiated growth.

Framing the Study

With cognitive developmental theory and self-determination theory as the framework for this case study, the primary focus was upon the development of both students and teachers and how this occurred over time within situation specific cultural and social contexts. I examined the perceptions and understandings of participants along with their relationships to behaviors and products and patterns and stages in understandings. Adherence to self-determination theory provided guidance to me for establishing a collaborative relationship with my participants. Such a relationship was crucial to my ability to learn about the true nature of teachers' and students' growth (or lack of growth) in the use of academic choices in schools that are subject to all the current pressures of required curricula and testing.

A diagram of the conceptual framework upon which the research design was based may be found in Appendix A. It was built upon the developmental cycle of planning, working, and reflection for the teachers, the students, and myself.

Delimitations

This study was intended to generate theory rather than test an already established theory. It provided a rich set of data regarding the thinking and practice of one highly motivated elementary school teacher over a period of one academic year. The generalizability of the findings will need to be established by their resonance with readers' experience (Merriam, 1998) and by further studies that examine their applicability to a broader range of teachers and students.

The contextual factors examined by this study were limited to those that were observable within the classroom setting. Other factors such as children's varying experiences with having choices and the nature of those choices outside of school are likely also to have an impact on the nature and outcomes of academic choice provision in classrooms. Children of varying types of socioeconomic, cultural, and family backgrounds are likely to have been exposed to different prior experiences with choice-making that may support or hinder choice-making in the ways offered in school.

Another factor that may have a strong influence on children's responses to choices when they are provided in the course of instruction is the nature of their past experiences in school and their affective orientation toward learning and school. Children who see themselves as non-learners or learning as difficult and unpleasant, for example, may respond to choices in learning very differently than those who value learning as pleasant and empowering. Although such factors probably influenced some of students' responses to academic choices in this study, analyzing this in detail was beyond the scope of this study.

Summary

The goal of this case study was to more completely identify the contextual factors and teacher understandings and actions that influence the nature, development and outcomes of academic choice provision at the elementary school level and relate them to outcomes of choice provision for students' participation and learning. Factors examined included those that were directly observable within the classroom context including administrative expectations and requirements, student behaviors and work, and the thinking and development of the teacher in her use of academic choices.

Chapter Two will provide a review of the research literature which provided a base for the development of this study. Chapter Three decribes the research methodology, chapter Four the results of the study, and in chapter Five I summarize and discuss the implications of those results.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

In this chapter I will review research literature concerning the use of academic choices to address four broad categories of information: (1) the various types of academic choices to which the literature refers, (2) the outcomes of academic choice provision as described by researchers, (3) important contexts that impact the use of academic choices, and (4) research on teachers' understandings and perceptions about academic choices.

Boundaries of the Review

To be included in this review literature must examine or describe some aspect of either the processes or the outcomes of providing students with the opportunity to make selections in one or more aspects of a program of study between kindergarten and Grade 12. This includes subject areas that are generally taught in public schools in the United States such as Art, English, Mathematics, Physical Education, Science, and Social Studies. I excluded literature concerning student choices related to non-academic areas such as discipline or vocational training. I also excluded literature that focused upon pre-school children, college students, and adult learners.

Research literature included 56 studies. Studies based in cognitive developmental frameworks utilized positivist, interpretive, and critical paradigms. Studies employing cognitive behaviorism or Self-Determination Theory as frameworks were all positivist studies. Participants in the studies included students and teachers of kindergarten to 12th grade, either in their usual classrooms or in laboratory settings that replicated significant aspects of a school setting and academic tasks. The studies included in this review were those in which student academic choice was directly examined. It was named, defined, and empirical data were collected and analyzed that related directly to its outcomes, procedures, or both. Four of the studies included in this review do not fall entirely within these boundaries. Two provided important results that extended the findings of other research within this review in important ways (Iyengar & Lepper, 2000; Reeve et al., 2003). Another includes pre-school children along with kindergarteners as participants (Amabile & Gitomer, 1984), and one study

examines choices among vocational skills for young, severely handicapped students as part of their individualized education plan (Cole, Davenport, & Bambara, 1997).

Types of Choices

When theoreticians, practitioners, and researchers discuss academic choices they rarely refer to the different types of choices that might be used or to the relationship between the types of choices and their potential effects on students. In practice, the general idea of choice provision gives rise to a wide variety of ways to give choices from broad to narrow and from choices among options to choices among actions. The options and actions among which students choose also range from open-ended ones to prescribed ones.

The term *narrow choice* indicates a choice that is offered within a specific, otherwise entirely teacher directed activity or unit of study. Narrow choices are confined to a finite set of activities, procedures, or materials within an otherwise teacher directed lesson. Examples of narrow choices include choosing among a list of writing topics, which 4 of 12 minerals to study, how many of a list of mathematics problems to complete, or which book to read before completing a pre-determined set of tasks related to the reading.

The term *broad choice* refers to situations in which many types of choices are offered within either a particular content area, such as language arts, or within a general pedagogical approach, such as open classrooms. For example, within a language arts unit students may choose what story to read, where to read it in the classroom, how long to take to read it (within limits), what aspects of the story they would like to share with others (within a teacher generated list, perhaps) and how they will share those aspects (with a drawing, drama, or written narrative, for example). Students might read a chapter together for Social Studies, but choose what aspects of the chapter most interest them, how they will go about getting more information about those aspects and how they will report on their learning.

Prescribed tasks are assigned activities for which there are only one or two correct procedures for completing the tasks, only one or two correct outcomes to the task, or both. When students choose which mathematics problems to solve, then solve them according to predetermined steps, they are

choosing among prescribed tasks. Choosing whether to complete a crossword puzzle or solve riddles would also be an example of choices between prescribed activities.

Open-ended tasks are assigned activities for which the number of ways of completing or correct outcomes for the task is limited only by the ideas and resources available to students. Examples include creating story problems to illustrate mathematics equations or deciding how to illustrate the main event of a story.

Broad Choices

Much of the research conducted within cognitive developmental frameworks examined broad choices in classroom settings similar to those described in the conceptual literature. In several of the studies academic choices were identified as a central component of broad learner-centered instructional methodologies. Specific details about choice implementation were neither named nor systematically held consistent across participating schools, teachers or classrooms (Aikin, 1942; Beyda, 1998; Donohue, 2000; Glessner, 1997; Jervis, 1986; Meier, 1994; Schweinhart, 2001; Whalen & Csikszentmihalyi, 1991). In these cases, the choices often included several types of choice at once, such as where to work, on what activity, and with whom. These researchers referred to choice provision as a general educational approach and did not attempt to make an exhaustive list of the various ways in which they were provided. A student might choose to work on a knitting project in the library corner with two other knitters, for example, or to write a play alone at a desk. He or she might choose a book to read, a science experiment to conduct, or a mathematics puzzle to solve. As with most teachers who offered broad choices such as these, opportunities to engage in the activities usually occurred as a structured segment of the school day as well as spontaneously during less structured times such as recess (Meier, 1994, for example).

In other studies set in classrooms, teachers offered students choices only through the content specific methodologies of writing process or whole language, but the choices were just as likely to be broad and open-ended as in those in which choice permeated all subject areas (James, 1995; Olson, 1998; Turner, 1995). These choices along with the overall curriculum or program within which they were offered were studied as one phenomenon, and the different types of choice within the whole

phenomenon were not identified or examined individually. Different approaches to supporting children to make and complete choices (such as development of phases of planning, working, and reflecting) were not mentioned.

A few studies examined broad types of choices in class sessions arranged and taught by the researchers themselves. In these cases the choices offered were specifically named and students were not generally exposed to academic choices outside of the experimental conditions (Rainey, 1965; Linn, et al., 1977; Rice & Linn, 1978; Eriksson, 1990). Rainey offered choices within the framework of how to go about solving teacher selected experimental questions within certain topics, resources, groups and locations. Choices could be made on many dimensions, such as how much time to spend on an experiment, how to use equipment, roles of group members, and exactly what and how many steps to take to find answers. Researchers investigating student choice in the context of science (Linn et al., 1977; Rice & Linn, 1978) arranged to teach a series of science lessons. They offered a choice among forty different activities and also provided open-ended choices within the selected activities as students decided how to go about finding solutions to the problems posed.

Narrow Choices

Although conceptual literature aimed at practitioners does not specifically refer to narrow types of choices, a large group of researchers did examine the use and outcomes of narrow choices within a context of otherwise teacher directed instruction. Most of these studies utilized theoretical frameworks of either self-determination theory or cognitive behaviorism and all were positivist in nature. The narrow types of choices studied ranged widely from relatively trivial choices of which computer icon to use to represent oneself (Cordova & Lepper, 1996; Iyengar & Lepper, 1999), to large and important ones of what content to study (Condon & Collier, 2002; Howard & Howard, 1997). Children were offered (a) choices of materials to use to complete assigned tasks (Amabile & Gitomer, 1984; Cordova & Lepper, 1996; Iyengar & Lepper, 1999), (b) choice of level of difficulty of tasks (Blackwell, 1974; Fisher et al., 1975), (c) choice of topic, unit of study, or program of study (Condon & Collier, 2002; Howard & Howard, 1997), and (d) choice of activities within a task, topic or program (Cordova & Lepper, 1996; Iyengar & Lepper, 1999; Prusak, 2000).

Most of the narrow types of choices were among prescribed activities. In a study of the impact of choices within individualized programmed instruction (George, 1977), for example, students could choose how many of four activities provided to complete before taking a posttest. Once the activity was selected, there were no choices within it. Berk (1976) provided even more restricted choices. Students chose only whether to experience programmed instruction as part of a group, or alone. Except for this option, no other choices were available.

Only two of the studies utilizing narrow types of choices involved open-ended activities. In a study of the effects of choice on creativity (Amabile & Gitomer, 1984), students chose among 10 materials to use to design a collage. Umbreit and Kwang-Sun (1996) offered a choice between the open-ended activities of computer games, basketball, or playing with a train set. For the remaining studies utilizing narrow choices, students engaged in prescribed activities once the selection of initial options was complete.

When choices were offered to special needs students (the focus of studies framed by cognitive behaviorism) they were quite limited in number and scope. Cosden et al. (1995) offered choices among 10 options of rewards and tasks, but the other researchers limited the number of options among which students might choose to 2 (Coniglio, 2000; Peterson et al., 2001) and 4 (Dyer et al., 1990; Dunlap et al., 1991; Dunlap et al., 1994; Cole et al., 1997). Apart from pre-academic tasks (Dyer et al., 1990) and vocational tasks (Cole et al., 1997), several researchers provided choices between textbook or worksheet assignments deemed to be similar in difficulty and content (Dunlap et al., 1994; Cosden et al., 1995; Powell & Nelson, 1997; Vaughn & Horner, 1997; Coniglio, 2000). Others (Jolivette, Wehby, Canale, & Massey, 2001) provided children with a choice of the order in which they would complete three mathematics worksheets. Moes (1998) also offered students a choice of the order of completion of worksheets or textbook assignments for homework as well as a choice of materials (different types of pens, glue, or scissors) needed to complete tasks, and the order of completion of items within tasks. Peterson et al. (2001) offered students a choice as to whether to work alone or with a teacher one-to-one.

The Relationship Between the Types of Choices Offered and the Outcomes of Academic Choices

The nature of the choices offered was directly related to the nature of the research question in three studies. Cordova and Lepper (1996) offered "instructionally irrelevant choices" of materials in order to isolate the effects of choice alone from its possible impact on instructional delivery and Blackwell (1974) focused upon certain aspects of the choice-making process such as levels of challenge students tended to choose in different conditions. Otherwise, no explanation was given for the researchers' selection of the particular types of choices offered and no researchers considered whether the types of choices offered might impact their outcomes until Reeve, Nix, and Hamm asked this question in a study of choice and self-determination published in 2003.

In Parts One and Two of that study, the researchers (Reeve et al., 2003) examined the effect of autonomy supportive versus controlling teachers and of choice provision on aspects of college students' sense of self-determination including internal locus, volition, and perceived choice. They found that choice provision was positively associated with perceived choice, but not internal locus or volition. This indicated that, contrary to the findings of some past studies, having choices did not affect the participants' sense of self-determination.

Noting that other researchers had also found that choice provision was not associated with greater intrinsic motivation or interest (Schraw, Flowerday & Riesetter, 1998, for example), Reeve et al. (2003) examined past studies of the relationship between choice and perceptions of interest and self-determination. They observed that the studies in which choice was not associated with increased intrinsic motivation offered choices only among *options* such as which book to read (Schraw et al., 1998) or which puzzle to solve (Reeve et al., 2003). Once the initial choice was made, students conducted the activity as directed. Studies that did find positive associations between having choices and aspects of self-determination such as intrinsic motivation offered what they called *action choices* or choices that included ongoing opportunities for participants to make decisions about how they would behave once the initial choice was made. In a study by Zuckerman, Porac, Lathin, Smith, and Deci, (1978), for example, participants selected among puzzles, but they also made choices about

whether to change puzzles, whether to take a break, and whether to return to a previously abandoned puzzle.

For Part Three of their study, Reeve et al. (2003) yoked participants in a control group and two experimental groups, one experiencing an action choice condition and one an option choice condition. Choices were associated with a sense of self-determination for participants in the action choice condition, but not for those in the option choice condition. The researchers concluded that the type of choices offered makes a difference in the outcomes of choice provision and that to affect students' sense of intrinsic motivation and self-determination choices need to include some freedom of action, not simply a selection among prescribed options.

Despite the fact that types of choices offered were not considered in relation to the outcomes of those choices in the rest of the research on academic choice, the body of research literature does provide some clear indications that such types of choices matter. For example, the two types of choice examined in a study by Eriksson (1990) produced different results; choice of program made no significant impact in either creativity or locus of control, but ongoing choices within a program did. Where Blackwell (1974) and Fisher et al. (1975) found that students did not tend to independently select mathematics problems that provided optimal challenge in the self-determination studies, Whalen and Csikszentmihalyi (1991) observed that students in their study of the "Flow Room" at the Key School did. The difference may have been in the types of choices offered. Both Blackwell and Fisher et al. offered narrow and prescribed choices among the options of easy, medium and difficult computation problems. It may be that students had little initial interest in the problems and were therefore unmotivated to select the problems of medium difficulty that would promote the most learning. With the broader choices of the Flow Room, students chose only projects that interested them. The activities tended to be more open-ended providing choices among actions as well as options.

Assor et al. (2002) assumed that most of the students they surveyed had few opportunities for meaningful choices in school. They proposed that it was the lack of personal relevance of choice experiences that led to their finding that students perceived that teachers' attempts to make learning relevant led to more cognitive engagement than provision of choice. This idea offers further support

for a proposal that the opportunity to choose on its own may not be enough to develop the greatest potential impact of choice. How valuable and meaningful students perceive choices to be probably varies with each student's response to the types of choices offered and most likely affects outcomes of choice provision.

Outcomes of Academic Choices

General trends for the outcomes of academic choice as determined by researchers include (a) increased engagement, (b) increased cognitive skills and learning, and (c) increased social skills. Despite the fact that researchers examined a variety of types of choices, the outcomes of academic choices were fairly consistent across studies with only a few exceptions.

Increased Engagement

Researchers confirm claims in the conceptual literature that opportunities for academic choices are generally associated with increased positive affect, engagement, and satisfaction for students. Findings indicated that students enjoy the opportunity to make choices in school (Coniglio, 2000; Edwards & Juliebo, 1989; Garland, 1995; Linn et al., 1977; McPhail, Pierson, Freeman, Goodman, & Ayappa, 2000; Moes, 1998; Rainey, 1965; Rice & Linn, 1978; Stanne, 1999). Not only did they enjoy doing the work they chose to do, but they also felt a greater sense of pride, satisfaction and ownership of their work (Edwards & Juliebo, 1989; Jervis, 1986; McPhail et al., 2000). In general, students given academic choices tended to incorporate the use of positive learning behaviors and strategies at their own initiative in order to meet personal goals and make personal meaning from school activities.

Several researchers documented rates of on-task behaviors. Most reported that students were more on-task when provided with academic choices (Dunlap et al., 1991). Jolivette et al. (2001) noted in their study that the effects were minor, whereas the other studies found robust effects. In contrast, Coniglio (2000) did not find any clear pattern between rates of on-task behavior and conditions of student choice and non-choice. It is difficult to determine the importance of this finding, however, because this researcher offered the fewest and narrowest choices of any (between two similar

mathematics worksheets), only two students participated, and only one of them completed all the tasks in the ABAB study design.

Unbreit and Kwang-Sun (1996) reported that over the course of weeks of daily choice opportunities, the boy who was the subject of their study shifted his preferences from less to more academic activities leading to an increase in the amount of academic work attempted and completed. Jolivette and others found that 2 of 3 students participating in their study attempted more mathematics problems given a choice of equivalent mathematics worksheets and Cosden et al. (1995) and Moes (1997) found that students were more likely to complete tasks under choice conditions.

For studies that directly examined the relationship between academic choices and intrinsic motivation, results overwhelmingly indicated that students who made choices between or within academic activities enjoyed those academic activities more and were more likely to continue to engage with them under free choice conditions, than those not given choices (Condon & Collier, 2002; Cordova & Lepper, 1996; Eriksson, 1990; Iyengar & Lepper, 1999; Prusak, 2000). This outcome occurred even when the choice was trivial and instructionally irrelevant, such as that of which icon to use to represent oneself in a computer game (Cordova & Lepper, 1996). Furthermore, according to Cordova and Lepper, when compared to students without choices, students who were given academic choices reported higher levels of perceived competence and self-concept, and expressed a preference for more challenging, related activities in the future. Students also were found to exert greater effort (Condon & Collier, 2002), and were more likely to expect to engage in similar activities, by choice, in the future (Eriksson, 1990; Prusak, 2000).

Student Choice and Issues With Increased Engagement as an Outcome

Researchers did identify some ways in which student engagement might not always be completely positive when involved with choice activities and might not always be linked with intrinsic motivation. These included (a) initial resistance to having academic choices by students with little experience with them, (b) inefficient use of time on task, (c) not selecting options representing optimal challenge levels, (d) cultural influences on students' responses to academic choices, and (e) effects of the number of options offered.

Initial Resistance

When Rainey (1965) provided choices as to how to go about conducting chemistry experiments to one section of a high school chemistry class, students' initial reaction was one of resistance. Deciding how to go about conducting the experiments, rather than simply being told what to do, was perceived as extra work. Initial resistance changed to enthusiasm once the procedures were more familiar.

Time on task

George (1977) found that students in a choice condition spent more time working on choice tasks. High school geometry students spent an average of 98.3 more class minutes on tasks than those without choices, but George interpreted this result to mean that students given choices were less focused and on task, not more. Unfortunately, he provided no data about students' task focus or behavior while undertaking the choice activities, so it is not possible to know whether this statistic actually indicates more or less cognitive engagement. The researcher did hypothesize that, assuming the students were less on task with choice lessons than those with teacher directed lessons, this may have occurred because they were inexperienced with self-direction and did not have the skills necessary to be time efficient.

Selecting optimal levels of challenge

Freely choosing to undertake a reasonably challenging activity is one important indicator of cognitive engagement. Since self-determination theory predicts that intrinsic motivation orients a person toward choosing tasks that present an optimal challenge (not too easy or too hard), the tendency of students to select activities of medium difficulty was measured in three studies (Blackwell, 1974; Cordova & Lepper, 1996; Fisher et al., 1975). Results varied among the three studies. Cordova and Lepper (1996) found that "instructionally insignificant" choices had no significant effect on the level of challenge or complexity of tasks selected in a mathematics computer game designed to teach order of operations to fourth and fifth graders. Fisher et al. (1975) found similar results with the more instructionally significant choices level of challenge for mathematics problems. In contrast, Blackwell (1974) found that students from open classrooms, who reported higher levels of daily choices, were

significantly more likely to select moderately challenging mathematics problems in a laboratory setting than students from traditional classrooms, who reported lower levels of choice in their regular classrooms. Glessner (1997) and Whalen and Csikszentmihalyi (1991) noted that often students with the most open-ended choices, in which they were free to choose content, processes, topics and goals for themselves, set optimally challenging goals that required deep concentration for success. In addition to findings on goal-setting, Blackwell also found that students who expected to be rewarded for good performance on a posttest were significantly more likely to select very easy or exceedingly difficult problems than those who expected rewards for showing growth in learning on a posttest, or who did not expect rewards at all.

The influence of culture on academic choice and intrinsic motivation

Iyengar and Lepper (1999) noted that "For Americans, individual choice and personal autonomy may be deeply intertwined with one's sense of self-identity" (p. 350), but not all cultural groups share these values. "Most non-western…cultures," they add, "strive for interconnectedness and belongingness with their social in-groups…" over independence and autonomy (p. 350). Yoked sets of three students within Asian and Anglo American groups were placed in one of three conditions: (a) personal choice in which students selected which anagram puzzle they would complete; (b) Mom choice in which students were given an anagram puzzle to work and told that their Mom had selected it for them, and (c) experimenter choice in which students were told that the unfamiliar experimenter had chosen the particular puzzle they were given to work.

In a second experiment reported in the same article, fifth grade students played a mathematical computer game with a fantasy component, designed to teach order of operations. For this study, personal choice consisted of the instructionally irrelevant choices of which icons to use and what names would be given to spaceships that represented oneself and the opposition in the game. For the in-group condition students were told that they were to use the icons and names that had been selected because most of the students in their class wanted them. In the out-group condition students were told that the icons and names they were using had been selected by "most of the third graders at the last school" (p. 356).

The two studies yielded similar results. Both Asian American and Anglo American children demonstrated greater levels of intrinsic motivation in the personal choice condition than they did in the experimenter choice conditions or the out-group choice conditions. The Asian American children, however, demonstrated the greatest degree of intrinsic motivation in the conditions where they believed that trusted significant others had selected aspects of the task. Anglo American children were significantly less intrinsically motivated under these conditions. The researchers concluded that while personal choice increased intrinsic motivation for both cultural groups over situations where a stranger or members of an out-group made the decisions, having in-group members make decisions about one's activities is even more motivating for Asian Americans.

Number of options available

Iyengar and Lepper (2000) conducted a study comparing the effects of having a small number of options to those of having a large number from which to choose. One group was given a list of six possible topics for an optional extra credit essay from which to choose, while another group was given a list of thirty possible topics. Results indicated that students given the smaller number of options were significantly more likely to decide to write the optional paper. The quality of both the content and the written form of those papers was significantly better than that of those who chose from thirty options.

Increased Cognitive Skills and Learning

Cognitive Skills

Various researchers have found results to support the contention that academic choices have a positive effect on aspects of cognitive skills and performance including (a) problem-solving and critical thinking skills (Cordova & Lepper, 1996; George, 1977; Iyengar & Lepper, 1999; Linn et al., 1977; Rice & Linn, 1978), (b) creativity (Amabile & Gitomer, 1984; Eriksson, 1990), (c) greater use of reading strategies (Turner, 1995), (d) greater persistence in the face of difficulty (Turner, 1995), (e) greater likelihood of setting learning goals as opposed to performance goals (Turner, 1995), and (f) more self-initiated revision and editing of work (Glessner, 1997).

Problem-solving and critical thinking skills appeared to be enhanced by choice conditions in Iyengar and Lepper's (1996) cross-cultural comparison. Both Anglo and Asian Americans allowed a choice of anagrams scored higher on a posttest for solving anagrams than those who were assigned anagrams. Creativity also appeared to be enhanced by the opportunity for choices. Amabile and Gitomer (1984) found that young children given a choice of materials constructed significantly more creative collages, as judged by outside experts, than those given no choice. Eriksson (1990) measured creativity in terms of flexibility of thought, fluency, and originality. He found that of two thinking skills programs for gifted students in South Africa, the one that provided regular student input into which activities they would pursue and how they would pursue them was related to higher scores of student creativity on a posttest than a more traditional, highly directive program.

Turner (1995) compared traditional literacy instruction with that in whole language classrooms. She found that when tasks included student choices as to what resources or information to use, or how to go about using information to solve a problem, students were significantly more likely to utilize reading strategies of decoding and comprehension to read new texts. These students also showed greater persistence in staying with difficult tasks, and they tended to set learning goals (for self-improvement or learning specific content, for example) rather than performance goals (to complete a worksheet, or learn word parts, for example). Girls, but not boys, were significantly more likely to initiate behaviors that helped them concentrate on their work, such as asking for quiet, or moving to a better work space. This was true regardless of the overall curricular approach, but whole language classrooms were found to offer more opportunities for choices than basal classrooms.

Glessner (1997) found that when teachers gave students choices within regular language arts objectives and activities, students would tend to adapt the chosen assignments to fit their own interpretation of what was valuable to know and understand, bringing more relevance and personal meaning to learning tasks. Students were also more likely to self-initiate revisions and editing of chosen tasks than they were with wholly teacher directed tasks.

Studies involving students conducting science experiments (George, 1977; Linn et al., 1977; Rice & Linn, 1978) indicated that students with choices as to how to go about setting up experiments

to solve a given problem, which apparatus and problem to solve, or both, understood the problem better, controlled variables better and exhibited generally superior performance in completing the experiments than their counterparts who had no choices. This would seem to reflect better performance in cognitive skills such as creativity, flexibility, reasoning, and critical thinking. One correlational study did not corroborate these findings; Beyda (1998) found that student choice activities were not significantly correlated with an increase in positive academic behaviors for students, although there was a trend in this direction.

Learning

Half of the studies that examined the effect of academic choices on student mastery of academic content found that choices made no difference in learning outcomes and half found that choices were associated with increased learning. Five studies utilizing a pretest-posttest format found no significant differences between the academic achievement of students who had choices and those who did not (Barry et al., 1997; Coniglio, 2000; Cordova & Lepper, 1996; Dyer et al., 1990; George, 1977; James, 1995). James tested a broad range of academic areas after students had been exposed to either traditional or whole language classrooms for most of an academic year, whereas Barry et al. and George tested students only on the specific factual knowledge related to the choice/non-choice activities. Barry et al. also compared the knowledge of girls and boys across conditions, finding no significant differences. Cordova and Lepper (1996) used a pretest-posttest design to examine mastery of geometry facts after playing a geometry learning game. They found no difference between choice and non-choice groups in mastery of geometry facts, generalization of learning or on retention of material after two weeks. Choice seemed to be neither instrumental nor detrimental to learning facts. Edwards and Juliebo (1989) compared students' writing under teacher directed and student choice conditions. They found that choosing a writing topic did not affect the quality of students' writing.

For Coniglio (2000), who assessed academic achievement in terms of rate of accuracy on tasks, one of the participants did show a pattern of increased accuracy in choice conditions versus non-choice conditions, but the other two demonstrated inconsistent results across the alternating choice and non-choice treatments in her time series design. Dyer et al. (1990) found no effects for choice

provision in student accuracy. In a study of severely developmentally delayed students choice of pre-academic tasks and rewards, none of the 3 children demonstrated systematic differences in accuracy between choice and non-choice conditions. Interestingly, in both of these studies, students experienced choices for only 3 weeks or less.

Cordova and Lepper (1996) did find that fourth and fifth grade students given instructionally insignificant choices in a computer game aimed at developing mathematical skills scored higher on a posttest of those skills than those without choices in the learning task. In Iyengar and Lepper's (1999) cross-cultural study, Anglo American children performed better on a posttest of mathematical skills when the instructional game included personal choices than when there were no personal choices. Asian American children scored equally well in the personal choice condition and equally less well in the out-group choice condition, but they scored significantly higher in the in-group choice condition than the personal choice condition.

Five other studies found significant positive differences for students with choices (Berk, 1976; Cosden et al., 1995; Howard & Howard, 1997; Moes, 1998; Schweinhart & Smith, 2001). Berk found that a simple choice as to whether to complete programmed instruction in either spelling or vocabulary tasks alone or with others was associated with higher scores on the posttest. Even this positive result was not unequivocally clear, however. The difference was statistically significant only for the vocabulary test. Howard and Howard (1997) measured development of physical education skills on a posttest as compared to a pretest, and found that skills showed more improvement when students were able to choose the activities through which they would learn and practice compared to when they had no choice. Schweinhart and Smith (2001) found that students from schools practicing the High/Scope program in primary grades had significantly higher scores on statewide tests of mathematics and reading than students from demographically comparable schools without High/Scope. This finding, based on implementation of the program over multiple years is certainly indicative of the benefits of High/Scope's model for early elementary education. Whether the results can be directly attributed to student academic choice, which is central, but not alone as a strategy within this approach, cannot be determined.

Choice provision clearly improved accuracy rates in studies by Cosden et al. (1995) and Moes (1998). Given choices between academically equivalent worksheets or textbook assignments, students completed tasks with greater accuracy when they chose them than when the teacher assigned similar tasks. When students had choice of both tasks and a reward to be given contingent on a standard of accuracy, the accuracy level was higher than it was with choice of task alone (Cosden et al., 1995). Given choices of the order of homework task completion and some of the materials used for the tasks such as types of pens, students completed homework assignments with greater accuracy than in conditions in which they were instructed which materials and order of completion to use for similar homework tasks (Moes, 1998).

Increased Social Skills

Researchers have found some support for claims that choice provision seems to promote better student behavior and a wider range of friendships and social skills than non-choice conditions. In addition to these topics, researchers also found indications that academic choices, even quite narrow ones, can have a positive effect on student discipline.

Condon and Collier (2002) found that students given a choice of three physical education units reported that they enjoyed being with their friends more and that they were more likely to make new friends when they participated in an activity of choice. Teachers of the students reported fewer discipline problems when students were engaged in self-selected activities. Whalen and Csikszentmihalyi (1991) observed "...an unusually fluid balance ... between respect for rules and structure, and the exercise of student choice and control ...". (p. 13). The findings of Allman-Snyder et al. (1975) that students with more experience taking initiative and making decisions about their learning were also more likely to try to solve inter-personal problems through independent reasoning and discussion rather than relying on authoritarian methods may provide a clue to at least part of the reason for these outcomes. Donohue (2000) correlated learner-centered instruction with lower rates of peer rejection in first grade.

One in-depth case study of a boy known as having problems with discipline and friendships (Jervis, 1986) indicated that the regular experience of very broad, open-ended choices over two years

was a factor in his increased participation in class activities and friendships. Choice provided common interests with some classmates that initially motivated the boy, Daryl, to give and take ideas and share products. Perhaps more importantly, the other children came to see him as someone with something valuable to offer. Gradually, the sense of belonging and participation during choice activities generalized into other activities in the classroom. By the end of the two years, Daryl had come, of his own initiative, to be a more cooperative and productive member of his class.

Most of the cognitive behavioral research on choice with students with special needs asked whether choice provision was associated with a decrease in problem behaviors. Students who participated in the studies were generally selected based on the fact that they engaged in a great deal of disruptive behavior. The emotionally disturbed 12-year-old girl "Jill" studied by Dunlap et al. (1991), for example, "displayed high-intensity disruptive behavior characterized by aggression, yelling and cursing, perseverative and delusional speech, spitting, tipping over desks, and property destruction" (p. 388). Although a number of behavior management programs focusing on reinforcements had been implemented, over the course of six years none had been successful for more than a brief period. The urgency of the need to deal with problem behaviors drove much of the research on academic choices for the group of researchers working with special needs populations.

Findings generally concurred that choice provision was associated with lower levels of problem behavior for students than situations in which no choice was provided (Dunlap et al., 1994; Dunlap et al., 1991; Dyer et al., 1990; Moes, 1998; Peterson et al., 2001; Powell & Nelson, 1997; Umbreit & Kwang-Sun, 1996; Vaughn & Horner, 1997). In some cases the differences were especially dramatic (Dunlap et al., 1991; Dyer et al., 1990) with participants' rates of disruptive behaviors reduced almost to zero during choice conditions. Even choices between non-preferred activities resulted in significantly lower amounts of problem behaviors compared to assigned preferred activities (Umbreit & Kwang-Sun, 1996; Vaughn & Horner, 1997).

Two researchers found opposing results. Coniglio (2000) obtained inconsistent results concerning problem behaviors just as she did with factors of academic performance and achievement. Although problem behaviors were sometimes lower than in no-choice conditions, they were also

sometimes higher. She could find no clear pattern across conditions or students. Cole et al. (1997) also found no effect of choice for student problem behaviors that differed from assignment of preferred tasks or of non-preferred tasks. Disruptive behavior was low across all conditions, leading the researchers to wonder if their presence and close attention affected the outcomes.

Contextual Considerations in Academic Choice Provision

Some researchers also considered varying aspects of the contexts for academic choices. Those who focused on students examined the impact of students' prior knowledge and students' reasons for making the choices that they did. The remaining researchers who addressed contextual factors focused on teachers. They examined the effects of external pressures on teachers' rate of choice provision, teachers' understandings of related key concepts and rationales for providing choices, and their perceptions of the obstacles to choice provision.

Several studies examined the relationship of various contextual factors to successful academic choice provision. These factors included (a) students' prior knowledge of content and skills related to choice activities, (b) reasons why students chose as they did, (c) external pressures on teachers, (d) teachers' understandings of important concepts related to academic choice provision, and (e) teachers' perceptions about the rationales for and obstacles to providing academic choices.

Prior Knowledge

Five studies (Garland, 1995; Olson, 1998; Rice & Linn, 1978; Stanne, 1999; Turner, 1995) indicated that students' prior knowledge affected the outcomes of academic choices. Rice and Linn (1978) tested the effect of prior instruction in related content and skills on students' selection and involvement in free choice science experiments. Students who either had prior instruction, or scored high on the pretest, performed more challenges within activities. Those who had prior instruction in related content and skills were more engaged, spoke to peers less often, but were more likely to speak about the processes and results of the experiments when they did talk to peers. Olson (1998) observed that students relied on the teacher's shared knowledge of good literature and of them as learners in order to make worthwhile choices of books to read independently. Garland (1995) found that along with having choices, prior knowledge of a topic through direct instruction or personal experience

enhanced high school students' feeling of satisfaction and enjoyment of research projects. Stanne (1999) found that students tended to choose physical education activities with which they had prior familiarity.

Factors Influencing the Choices Students Make

Five studies identified factors that influenced students to choose as they did (Linn et al., 1977; McPhail et al., 2000; Rice & Linn, 1978; Stanne, 1999; Whalen & Csikszentmihalyi, 1991). With the exception of McPhail et al. who conducted statistical analyses and Stanne who conducted interviews, researchers did not describe data collection or analysis procedures that led to these results. Therefore, it is impossible to know the basis for all the findings, although they do provide some initial, tentative information about this topic. Factors identified included students' favored learning styles (McPhail et al., 2000), interest and prior knowledge (Linn et al., 1977; Rice & Linn, 1978), nature of products of activities (Linn et al., 1977; Whalen & Csikszentmihalyi, 1991)), level of challenge provided and skill required (Whalen & Csikszentmihalyi, 1991), resources available and clarity of instructions (Rice & Linn, 1978), and the nature of interactions with others in the class (Stanne, 1999).

Pressured Teachers and Rate of Choice Provision

Ferree (1997) conducted a cross-national ethnographic study of 4 middle school English teachers who worked under varying levels of external assessment of their students' knowledge of literature. She found that "...where external assessment of literature existed, it appeared to drive much of the curriculum. It also worked directly against choice in reading" (p. 18). These results were based upon interviews with teachers and students as well as direct observation.

Deci et al. (1982) examined the effects of external performance pressures on teachers in a laboratory study utilizing college students in the roles of both teachers and students. Given the task of teaching someone how to solve a spatial relations puzzle, one group of teachers was given informational instructions to "facilitate the student's learning how to work with the puzzles" (p. 853). The second group was given controlling instructions. They were told to "ensure that the student learns to solve the puzzles" (p. 853). Those teachers who were given controlling instructions were significantly more demanding and controlling with their students and offered the students significantly

fewer choices as to how to go about solving the puzzle. More recently Pelletier et al. (2002) found that the more teachers perceive pressures to perform from administrators, colleagues, curriculum requirements, or students who seem to be unmotivated to learn the less frequently they offer choices to students.

Teachers' Understandings of Key Concepts and Rationales Related to Academic Choice Provision

Two studies examined teachers' understanding of the nature of students' interests and the role of individualization and academic choices in curricula (Bussis et al., 1976; Johnston, 1989). Both found patterns in teachers' explanations that indicated a range of cognitive understandings of these constructs among teachers.

Johnston's Category One teachers believed that interests belonged primarily to groups. The teacher's role was to direct student behavior and learning and curriculum was understood to be handed down by experts. These teachers believed that the role of individualized instruction was to help students conform to predetermined group levels.

In Category Two, the teachers understood their role to be primarily facilitative. They understood curriculum to be open-ended and to come from a variety of sources. Individualized instruction meant adapting curriculum to meet each student's interests and needs and giving students a voice in decision-making about what and how they would learn. Individual differences were valued rather than group norms.

Bussis et al. (1976) developed four categories of teachers' orientations related to understanding children's interests and the role of academic choices based on interviews with 60 teachers who were attempting to implement open classrooms during the 1970s. The first two groups appeared to be subsets of Johnston's Category One and the second two appear to be subsets of Johnston's (1989) Category Two.

Those 20% in Orientation A held stereotypical views of students' interests and attributed interests to groups rather than individuals. These interests were seen as weak, whimsical, easily

manipulated and as obstacles to teaching the required curriculum. Students were rarely or never provided with choices.

Orientation B teachers (30%) also saw interests as propensities of groups in general, but many believed that worthwhile learning did occur when children pursued interests. Pursuit of interests was associated with positive affect and understood to support fun, enrichment activities rather than those that were integral to learning important curriculum content. Like Johnston's Category One teachers they saw their role as directive and curriculum as externally determined.

Orientation C teachers (22%) believed that interests reflected individual patterns and could foster learning associated with curricular goals just as Johnston's Category Two teachers did, but they also believed that student interests might conflict with the required curriculum and their academic goals for students. Teachers were understood to be responsible for motivating and interesting students rather than responding to students' motivations and interests.

Orientations B and C saw a wide variation in the ability of children to have interests. Orientation D teachers (28%) assumed that interest was a characteristic of all people and that there was continuity and inherent strength in those interests. Like Johnston's (1989) Category Two teachers, they discovered students' interests through observation and personal interactions, and the teacher's role was understood to be facilitative more often than directive. Interests were understood to be integral to learning and were not always associated with fun but also as motivators for perseverance and self-discipline.

Based on the findings of Johnston (1989) and Bussis et al. (1976) it appears that when teachers claim that choice leads to greater student engagement or learning, different teachers may hold different ideas as to what this means in practice. Teachers appear to think about choice in patterns that change from less to more complexity and from more teacher-centered to more student-centered frameworks.

In other studies, the most often repeated reasons teachers gave for choice provision had to do with its positive effects on student engagement (Bussis et al., 1976; Flowerday & Schraw, 2000; Garcia-Gonzalez, 2000; Heweker-Hoy, 1998; Yamzon, 1999). Heweker-Hoy (1998) found that

teachers' perceptions of student apathy was an important impetus for them to make the effort to change from traditional, teacher-centered methods to those that made use of student choice. Once choice was implemented as a strategy, teachers were satisfied that it did increase students' engagement in learning activities. Garcia-Gonzalez (2000) found that teachers who wanted to adhere to principles of critical pedagogy viewed student choice as one way to empower students through access to their personal interests and talents. Other teachers viewed choice provision as a structure for enrichment activities only - something fun and engaging for students to do when their more important, if less engaging, teacher-assigned work was completed. These differing perceptions correspond to the findings of Bussis et al. (1976). Of 60 teachers interviewed, 72% understood student choice not as a way to empower students, but as a way to keep them happy and busy while the teacher pursued her externally ordained agenda. The remaining 28% viewed choice as an important strategy for fostering a sense of purpose, meaning and empowerment in students.

A study of teachers' understandings of the rationale for choice provision (Denton, 2003) indicated that the 171 teachers interviewed tended to agree that choice provision empowered students. Deeper discussion of their concepts of empowerment revealed that they held a range of understandings of empowerment, from the giving away of one's own power in trust that students would behave as the teacher wanted to the activation of students' inherent power to free them to think for themselves. Different conceptions of empowerment might lead to different expectations and concerns about the quality of engagement in choice activities.

Teachers' Perceptions About Obstacles To Providing Academic Choices

Obstacles to choice provision reported by teachers include (a) lack of time, (b) lack of resources, (c) pressure to teach externally ordained curriculum content (d) lack of administrative support, (e) lack of understanding of parents, (f) student behavior, and (g) teacher expertise (Denton, 2003; Garcia-Gonzalez, 2000; Glessner, 1997; Heweker-Hoy, 1998; Yamzon, 1999).

Teachers reported that both planning and implementing academic choice provision took more time than implementing a teacher directed lesson, and time was in short supply. Providing choices within open classroom, whole language, or problem-based learning approaches also requires access to

a variety of resources and materials. Where these were in short supply, time and money were required to locate and obtain them, or teachers felt limited in the kinds and amounts of choices they could provide their students.

Although only the three studies described previously (Deci et al., 1972; Ferree, 1997; Pelletier et al., 2002) directly examined the effects of external pressures on teachers' willingness to provide choices, other studies revealed that teachers were aware that pressures to teach their students specific content through mandated curricula, learning standards, and student testing limited their comfort with choice provision (Garcia-Gonzalez, 2000; Yamzon, 1999). Teachers who named required curricula as obstacles believed them to be directly opposed to provision of student choices.

Every study that addressed the issue of obstacles to choice provision found that teachers discussed the importance of administrative support to teachers' willingness and ability to offer choices to students (Garcia-Gonzalez, 2000; Glessner, 1997; Heweker-Hoy, 1998; Yamzon, 1999). Teachers reported that to use academic choices successfully they needed to know that their administrators believed that student choices were valuable, provided training in teaching approaches that incorporated academic choices, or both. Parental support was more of a concern for less experienced teachers (Denton, 2003). Concerns about student behavior referred primarily to beliefs that some students would take advantage of less teacher direction with off task behavior and concerns about teacher expertise referred to a lack of background knowledge and experience with academic choice provision.

Contextual Factors and the Outcomes of Academic Choices

Findings of research on academic choices provide some striking consistencies as well as some unclear, mixed results. Although provision of choices appears to support increased engagement, intrinsic motivation, and positive affect for learning activities, some of the behaviors that are said to be components of intrinsic motivation, such as aspects of cognitive engagement, and selecting optimal levels of challenge, showed mixed results among studies in which they were examined. Findings concerning the reduction of discipline problems and increases in positive social interactions were more consistent, but still showed some discrepancies. Results for academic achievement were mixed as well.

Consideration of the contextual factors that may influence the nature and outcomes of academic choices may be central to understanding this variation in outcomes.

Researchers have only begun to identify and address the many factors that influence teachers' and students' experiences of academic choices. Those that were identified were not incorporated into many, if any, other studies of academic choices beyond the one that named them. Many researchers attempted to deal with contextual factors by isolating academic choices as a factor in the outcomes. They utilized control groups or yoked pairs and planned carefully for consistency of setting, tone, interactions, activities, participants, and time frames. Just as almost all the researchers were blind to the effects of the types of choices being provided on their results, however, they may well have been blind to the effects of other contextual factors for which they did not account in their research designs.

The practice of providing academic choices cannot be isolated from the types that are provided or from other contexts within which they are provided. Researchers have demonstrated that characteristics of students such as prior knowledge, cultural backgrounds, learning styles, and interests make a difference in how they respond to choices. Other factors may include students' past experience with choices both in and out of school, their attitudes toward school and school tasks, and their ability to organize tasks and meet goals independently.

Characteristics of teachers such as their conceptual understandings, their response to external pressures, and their beliefs about the value of academic choices also create important contexts for academic choice provision. The amount and quality of professional development opportunities and ongoing support for teachers as they attempt to incorporate academic choices may influence student outcomes.

Characteristics of the school setting such as the nature of required curricula, planning time, methods of evaluation and the nature of administrative and parental support seem to make a difference in the prevalence of academic choices and perhaps in the nature of those that are provided. Students appear to respond differently depending on the number of options they must choose among. Characteristics of the activities themselves and the materials available for them seem to matter as well. The way in which students' work on choice activities will be assessed or whether a teacher uses

external motivation such as rewards or threats in association with choice activities may also influence the outcomes of academic choices.

Summary

Academic choice refers to the act or opportunity of selecting between two or more options or actions relating to either the content of curriculum, the processes of curriculum, or both. Such a straightforward definition might imply a fairly simple pedagogical intervention. Researchers, theoreticians, and teacher educators often treat choice as simple and individual studies generally consider only a few variables. As a whole the literature on academic choice provision provides a somewhat more complete and quite complex picture of many often inter-related factors that influence teachers' and students' experiences of academic choice provision as well as its outcomes. These include the many different types of choices that may be provided, the nature of constraints imposed on choices due to the need to meet certain learning objectives, institutional expectations, and schedules, and the larger classroom and community contexts within which choices are provided.

Most of the research findings, but not all, indicate that academic choices do increase student engagement, cognitive skills, and social connections and skills. Findings on the impact of academic choices on student learning have been positive in half the studies that measured this outcome. Inconsistencies in findings may be explained by factors such as the types of choices offered, the characteristics and past experiences of students and teachers, and the characteristics of the school setting and the choice activities. There is a need for a more comprehensive understanding and systematic organization of the factors that influence the nature and outcomes of academic choices in order to better understand their practical uses, benefits, and limitations as a part of school curricula.

CHAPTER 3

METHODS

Introduction

The purposes of this study were to (a) better understand the steps and processes whereby teachers develop increasing expertise in their use of academic choices, (b) explore relationships between a teacher's understanding of key concepts related to academic choice provision and types and contexts of choices, and (c) explore relationships between the apparent outcomes of academic choices for students and the types and contexts within which choices are provided. The following research questions guided my data collection and analysis:

1. What contextual factors most influence teacher and student use of academic choices?
2. To what extent does a teacher's implementation of academic choices change over time given ongoing support?
3. To what extent does a teacher progress in her understandings of key concepts related to choice provision as she develops her practice?
4. To what extent do academic choices affect student outcomes?

Using qualitative methods, I conducted an analytical case study (Merriam, 1998; Stake, 1995) of academic choice provision in a fourth grade classroom in an urban elementary school in Massachusetts. The use of qualitative methods best allowed for consideration of the richness and complexity of the classroom environment. Qualitative methods permit an exploration of interactions among people's understandings and behavior, contexts, and outcomes of teaching, which are the focus of this study. The case study method offered an ideal framework for exploration of my research questions because it is "a design particularly suited to situations in which it is impossible to separate the phenomenon's variables from their context" (Merriam, 1998). The nature of the successes and failures of academic choice provision is inseparable from the contexts in which it is provided. By looking in-depth at the use of academic choices in one classroom system for an academic year, I gained a more holistic view of the factors that influence the success of choice provision. The teacher's

processes for developing expertise in the use of this strategy may be seen and understood as they evolve in relation to contextual factors.

I chose to limit my research to one case in order to devote the entire amount of time I had to devote to data collection to gathering information about as many facets of this teachers' contexts and development over time as possible. I chose to aim for richness and depth of data over breadth.

This study was predicated upon the idea that teachers and students can grow and improve in their use of academic choices over time. Therefore, the case study was conducted as action research, for which the "primary purpose is as a practical tool for solving problems experienced by people in their professional, community, or private lives" (Stringer, 1999, p. 11). I worked collaboratively with the classroom teacher to develop contextually useful models for academic choice provision that she believed would work best for her and her students. Action research is context bound, just as case studies are, but it also focuses on solving practical problems (Greenwich & Levin, 1998). This type of research assumes the full involvement of participants in a consensual process of knowledge construction. My role as an action researcher was both catalyst and supporter in order to facilitate the growth of the teacher and her students in the use of academic choices. I also served as the primary documenter of this process.

Site

This study took place in an urban elementary school in Massachusetts, which was among those in which a group of teachers had received initial training in academic choice provision through my employer, The Northeast Foundation for Children (NEFC). The training consisted of weeklong workshops in the Responsive Classroom®, an approach to elementary education that emphasizes the integration of social, emotional and academic learning as the most effective approach to education. Specific strategies for integrating these aspects of learning in school include (a) daily morning meetings that blend social and academic goals, (b) collaborative rule-making among teachers and students and "logical consequences" provided by teachers for misbehavior, (c) teacher modeling and interactive guided discoveries to promote independent use of classroom materials, (d) considerations in classroom organization that promotes student engagement and independence, and (e) academic choice

provision. The school's principal and the district superintendent supported teachers' use of the Responsive Classroom® approach.

During the 2003-2004 academic year in which the study was undertaken, the school had 605 students in Grades pre-kindergarten to five. Of these students, 66% qualified for free or reduced lunch compared to 27% statewide, 13% had limited English proficiency and 16% were identified as special education students. Students were divided among African Americans (25%), European Americans (35%), Hispanic Americans (36%), and Asian Americans (3%). For the year 2002, 45% of fourth graders had passed the English Language Arts portion of the Massachusetts Comprehensive Assessment System (MCAS) compared to 54% statewide. On the mathematics portion of the MCAS, 28% passed compared to 39% statewide. The school has been rated as "on target" in its rate of improvement in language arts scores, but "declined", the lowest rating, in its rate of improvement in mathematics scores (retrieved September 17, 2004 from http:// www.greatschools.net/).

Because the MCAS scores of the students in the school were below the state averages, administrators, teachers and students were all under pressure to improve these test scores. The MCAS is administered in the third and fourth grades each spring. This study took place in a fourth grade classroom.

Ethical Considerations

Informed Consent

In the beginning stages of this study I obtained letters of informed consent from the teacher and students who were the participants following University of Massachusetts human subjects guidelines (See Appendices B and C). Of Ann's homeroom class, 16 students returned signed consent forms, 3 students' parents refused to consent to having their child's work collected or allowing them to be interviewed. Five students did not return the consent forms. Consent was received for all the students in Ann's reading class and for 11 students in the mathematics class.

I shared my conception of our respective roles and responsibilities for this project with "Ann" (a pseudonym), the participating teacher, during the first interview, particularly with regard to our

relationship as co-researchers. I also met with her students to share appropriate information and take questions about the project in September before beginning data collection.

Researcher Background and Biases

I was aware that given my background as a teacher educator, establishing a collaborative role with Ann, who was recently a student of a colleague of mine for inservice training, would require great awareness and care. It was important to delineate relevant aspects of my background and biases and to plan my methodology carefully to maximize the possibility of true collaboration between Ann and me.

Unlike Ann, I began the study feeling very comfortable with a primarily student-centered orientation toward teaching. Trained to teach using constructivist, developmentally appropriate methods of instruction, student choice provision was a central feature of my work as a classroom teacher of Grades Three to Six. For the past 12 years I have also provided inservice teacher education in strategies for implementing academic choices among other topics as an employee of NEFC. Recently, I authored revisions of NEFC's approach to teaching strategies for choice provision and undertook a leadership role in overseeing pilot instruction of the new approach by some of our presenters during the summer of 2003.

Ann received instruction in academic choice provision from NEFC, but not from me personally. I first met her as a visitor to her final instructional session in spring of 2003. Ann was aware that I was affiliated with NEFC and with her instructor for the course. Ann also owns a book that I co-authored.

Initially, she related to me as an authority rather than a collaborator. In our final meeting in June I asked Ann how our work together had and had not met her expectations when we began. She told me that when she volunteered for the project she expected that I would be her teacher, telling, directing and demonstrating ways of providing student choices. "I thought I'd be watching you more than you watching me. I'm going to have an expert on academic choice who is going to show me how to do it right," she responded. She said she realized that was not the case during our first meeting together, however. In our final meeting Ann provided evidence that she felt our relationship was more collaborative and less hierarchical than she originally imagined. Asked how I had helped her develop

her use of choices, she told me, "The way you looked at kids and made comments about them. . . . The whys, why do you think this is happening and why do you think ___ never does anything on time? All those things that I like to try to figure out."

I was aware that Ann tended to view me as an authority figure and possibly an evaluator when we first met to discuss this project and that I needed to construct and address our roles carefully when conducting action research with her. I worked to maintain awareness of my biases and the potential for hierarchical power relations with regular reflection and documentation in order to be "explicit and as self-aware as possible about personal assumptions, values and biases, affective states – and how they may have come into play during the study" (Miles & Huberman, 1994, p. 278). I did this by keeping a record of the nature of my interactions with Ann and my feelings about them as one important aspect of my research log.

In addition to maintaining self-awareness, I used the quidelines for the researcher's role in action research (Stringer, 1999) to establish myself as a collaborater rather than an authority in my work with Ann. I acted as a resource and a facilitator rather than an expert who was there to judge her or tell Ann what to do.

Researcher's Roles

In addition to emphasizing the solution of practical problems, action research assumes the full involvement of participants in a consensual process of knowledge construction.

> The role of the researcher is not that of an expert who *does* research but that of a resource person. He or she becomes a facilitator or consultant who acts as a catalyst to assist stakeholders in defining their problems clearly and to support them as they work toward effective solutions to the issues that concern them....It is an approach that requires research facilitators to work in close collaboration with stakeholders and to formulate 'flat' organizational structures that put decision-making power in stakeholders' hands. (Stringer, 1999, pp. 25-26)

My past experiences and philosophical orientation as a teacher and teacher educator provided initial support for establishing a collegial rather than authoritative role with Ann. My work with teachers tends to embody the same constructivist approach I take with children, in which I do not function as an authority, but rather as a facilitator. My comfort with establishing a non-judgmental

stance and a non-directive role provided balance to the factors that tended toward a hierarchical relationship.

In order to highlight Ann's processes and understandings and also in order to support her and not to let my views over-rule hers, I conveyed the expectation that she would make all final decisions about how to proceed with implementation. In the role of facilitating researcher I provided feedback in the form of observation, and interview data and interpretations, regular structures to support planning and reflection, and suggestions to help Ann analyze her situation and make informed decisions. I did not make decisions about how to proceed with either the goals or procedures for student choice provision except during one lesson in the early spring when Ann and I briefly switched roles. When making suggestions, I provided more than one option, as well as encouragement to develop and act upon her self-initiated ideas as well, so it was clear to Ann that I respected her autonomy. As a facilitator, rather than an authority, I was in a better position to gain insights into how Ann and her students proceeded and developed in their use of academic choices.

Throughout my research design, I selected strategies that were specifically designed to encourage collegial interactions with Ann. I developed protocols for our interactions (Appendix D) that carefully restricted my input to facilitation and support rather than decision-making and evaluation. When my initially established protocols for co-planning and reflection proved to be impractical, adaptations were made in keeping with the goal of fostering a collaborative rather than a hierarchical relationship as reported in my description of procedures for the planning phase of data collection. When I conducted observations my interactions with Ann and her students were non-directive and as non-intrusive as possible. I did share thoughts and ideas about class sessions with Ann as a part of our planning and reflection sessions, but I attempted to keep them in the form of non-evaluative and non-directive observations. I took pains to communicate that our common goal was to learn more about how Ann went about developing her use of academic choices in the particular contexts within which she worked, not to reach some goal predetermined by me. She knew at least as much about the topic as I did, and I was there to learn from her just as she would learn from our interactions in addition to her own practice.

Participants

The Teacher

The classroom teacher, "Ann", was among six who volunteered to participate in this study when I described it during an advanced session of The Responsive Classroom® course taught by a colleague during the preceeding spring. I selected her because (a) she was recommended to me by the course instructor as a teacher whose levels of understandings about the strategy of Academic Choice were fairly typical of those in this group of teachers, (b) she, unlike some of the volunteers, was certain of her teaching placement for the following year, and (c) she was particularly enthusiastic about working on this field study with me.

A fourth grade teacher, Ann was female, white and middle class. She had taught in the district for 23 years and at this particular school for 12 years. Ann was a member of her school's site-based management team (which met monthly to assist in governing the school), on a service team (which met weekly to discuss and plan for students deemed to be in crisis), and on a district-wide committee for the development of a social studies curriculum that would meet the state's new Curriculum Frameworks. In addition to these professional commitments, each Monday Ann attended fourth grade team meetings, staff meetings, or professional development sessions that were offered by her school district. She had recently taken an online course in assistive technology and summer workshops in computer technology and science instruction in addition to the sessions in Responsive Classroom®. Ann characterized herself as someone who was interested in a wide variety of ideas and approaches to teaching. She felt it important to "keep your eyes and ears open all the time for new things that will help [children learn]" (Interview, 6/9/04).

Ann had completed both introductory and advanced training sessions in The Responsive Classroom®. She possessed a beginning understanding of the rationale for and techniques of choice provision and a stated desire to focus upon improving her use of it. The second, more advanced course provided information about and first hand experiences with academic choice provision in each of the five day long sessions. Ann, along with other participants, was required to plan and implement a lesson utilizing academic choices that was observed by a consultant from NEFC, the sponsoring

organization for The Responsive Classroom®. The consultant also met with her after the observation to provide feedback and support.

The Students

Students participating in the study included Ann's homeroom class of 12 girls and 11 boys, ranging in ages from eight to ten years. This group reflected the school population in aspects of racial and socio-economic backgrounds and in the range of academic abilities and needs. In addition to the homeroom group, Ann also provided instruction to two other groups of fourth grade students. She taught mathematics to 19 fourth graders, 10 boys and 9 girls all classified as low ability in mathematics and she taught reading and language arts to 2 girls and 5 boys, also classified as low ability students in those subjects. Both these groups reflected a mix of racial backgrounds.

Data Collection Procedures

Data collection was cyclical, occurring over the entire course of the 2003 - 2004 academic year from August to the final week in June. (See Appendix D for a flow chart of procedures and Appendix E for an overview of data collected). Instruments included classroom observations, semi-structured and informal interviews with teachers and selected students, and documents relevant to academic choice provision. I used the categories for types and contexts for choice provision developed in the review of literature as a starting point for directing my inquiry using each of these instruments. For example, when interviewing teachers and students, I asked questions that related to the types and contextual factors of choice, and when observing I noted the relevant types and contextual factors. Teachers' understandings of concepts that have been established as central to choice provision such as empowerment and the role of the teacher in student-centered instruction also guided observations and interview questions.

Before beginning formal data collection in the classroom in October, I visited the classroom twice in September in order to get to know the students and for them to get to know me. I aimed to decrease novelty and increase comfort with having me in the classroom for Ann and the children as recommended by Miles and Huberman (1994). During those sessions, I participated in a morning

meeting, explained this project and my role in the classroom over the coming year, and observed and interacted informally with students as they worked.

Interviews

Interviews served three purposes. First, they provided information about Ann's and her students' perspectives on choice activities and their understandings of key concepts related to choice provision and the construction of knowledge. Second, they served as a way for me to facilitate growth in the teachers' and students' expertise in the use of academic choices to improve student outcomes through structured reflection. Finally, they helped to establish an atmosphere of collaboration as I took on the role of listener and asked questions that encouraged them to teach me about their experiences and knowledge.

I conducted three in-depth, 90-minute interviews (see Appendix F for initial guiding questions) with Ann at the beginning, middle, and end of the school year. Each of these interviews was conducted in an informal setting away from the school over a shared meal to encourage unhurried reflection and to "reduce both your threat quotient and your exoticism." (Miles & Huberman, 1994, p. 266) In addition to the more general in-depth interviews, I conducted informal interviews with Ann after each observed session in order to facilitate reflection and gather information on her evolving responses and ideas concerning her practice of choice provision. (See Appendix G for examples of questions used in these sessions). These interviews occurred in the classroom immediately following student dismissal and ranged from 20 to 90 minutes in length. All interviews were audiotaped and transcribed.

Informal interviews with students occurred as I interacted with them during observations. I selected students to interview in this way based upon whether their parents had given permission for them to be interviewed and on whether they furthered my goal of obtaining information from students representing a range of abilities and types of activities. Over the course of the year, I spoke with all the students in the class for whom I had parental permission.

On three occasions, once in the fall, once in the winter, and once in the spring, I conducted semi-formal interviews with 4 - 6 students upon completion of an observation session. (See Appendix

H for a list of guiding questions.) The students were selected in the fall and winter by Ann based upon whether they were done with the work of the observed lesson, whether she felt they could easily be excused from the first part of their next class, and whether their parents had given permission for them to be interviewed by me. In the spring I interviewed all 6 students in Ann's small reading group after observing a lesson with them. I initially hoped to be able to interview a few students in this way after each observed session, but this proved to be unrealistic due to time pressures and the fact that in this departmentalized setting, many of the students needed to go immediately to lessons with teachers other than Ann at the end of the observed lessons.

Observations

I conducted a total of 14 hours of observation in Ann's classroom over the academic year during lessons for which she provided some type of academic choice. This represented 10 different lessons or units utilizing choices that occurred over 20 separate sessions. Of the 10 lessons/units, 3 were mathematics lessons, 1 was a reading lesson, 2 were individual science lessons, 2 were science units, and 2 were social studies units. The purposes of these observations were to gain primary data on the procedures, contexts, and outcomes of choice provision, and to provide the classroom teacher with information beyond her first-hand experience for reflection and further planning.

As an observer, my role was "observer as participant" (Merriam, 1998, p. 101). Although I interacted with the other participants at times, my primary focus was upon observing and recording as much of the activity in the classroom as possible. Both students and teacher were aware of my role as observer and collector of data due to the co-planning sessions with Ann and my interactions and interviews with the students. Initially, I balanced the time spent in each observation between observing the teacher and the students to gain an overview of the activity in the classroom. I recorded teacher language and behavior, student language and behavior, and described students' work, classroom resources, and events relevant to the choice activities. Throughout the year, whenever Ann held a meeting with the entire class, usually to introduce activities or to lead students in sharing their work, I audiotaped and transcribed the session.

In March, I began to focus my observations upon two students who were working together or working next to each other at the same set of desks during times when students worked on the activities of the lesson. This provided more detailed information about students' thinking, engagement, and interactions. In addition to the language and activities of focus students, I recorded Ann's interactions with them as well as her general movements about the classroom and language in addressing the class as a whole. Students were selected to represent a range of types of activity for these focused observations and different sets of students were observed each time. Immediately upon completion of the class session I added notes about more general observations of other students that I had perceived as I recorded the activities of the focus students.

Documents

Documents were collected as they became available. These included examples of both students' and teachers' written plans and reflections concerning choice provision, and photographs of the work of students undertaken under various choice conditions. All photographs were made with a digital camera and saved on compact discs, then printed and filed along with the other documents. I also saved e-mail communications between Ann and me in which Ann shared thoughts and ideas about her use of academic choices. These documents were examined for evidence of Ann's evolving understandings and implementation of choice provision, and for students' understanding of and engagement in the learning objectives of the choice activities.

The Cycle of Research - The Cycle of Learning

In keeping with my purpose of exploring the development of Ann's knowledge of academic choice provision over time, the research design utilized the developmental model of the cycle of learning - planning, practice, and reflection (Black & Ammon, 1992). This cycle mirrors the procedures of action research as well. Stringer (1999) describes the circular (or spiraling) process of knowledge construction in action research as "look, think, act" (p.18). To *look*, or to *practice* is to collect data, to *think* is to *reflect* upon and analyze the data, and to *act* is to *plan* and implement increasingly improved strategies for reaching goals based upon the looking and thinking steps. This design also mirrors the steps through which the participating teacher has been taught to implement

academic choices with students as part of the Responsive Classroom® approach - that of *planning, working,* and *reflecting* (Clayton et al., 2003).

Because these were the terms being used with students, I also used the terms, *planning, working* and *reflecting* to name the processes that Ann and I used in our work together. I used the similar process of look, think, act to structure my steps in the research process, since these terms most closely described the cycle of data collection (as opposed to teaching), reflection, and planning that directed my work. A diagram of this layered model of the cyclical process of knowledge construction as a design for the study may be found in Appendix I.

Planning

The *planning* or *acting* stage for students includes planning what they will choose and sometimes planning in advance how they will go about completing activities. It encompasses planning for the next round of implementation and observation for the teacher and the researcher.

Ann, as teacher researcher, and I, as facilitating researcher, participated in the planning phase together. Originally I planned to use a carefully formatted protocol to encourage a collaborative process and insure that Ann took the primary initiative and made all final decisions about her lessons (See Appendix E). It became apparent during the first months that this format was impractical for several reasons.

First, planning for new lessons often began organically as part of reflecting on the lesson just completed. Rather than trying to stop this organic flow, I decided that the most constructive route was to go with it. Therefore, reflection and planning were often intertwined. It seemed that adhering to a pre-established protocol that artificially separated the two would be counter-productive. Because all my reflection and planning sessions with Ann were recorded and transcribed, I was able to separate the elements of each when I analyzed the data.

Second, Ann did not usually plan lessons using the sequence I had established for planning and was not comfortable with it. Instead, she tended to begin planning by naming the activities in which she wanted her students to engage. Once the activities were determined and procedures and materials needed to implement them established, she was ready to implement the lesson. I found that I

needed to intervene and guide her planning more than I originally intended in order to establish a learning goal and relate student activities and choices to it, and to address plans for assessment. Until spring when Ann began to identify learning goals at her own initiative, co-planning sessions generally consisted of Ann choosing the subject area and topic of the lesson, then brainstorming possible activities and choices. My role was to facilitate the articulation of her learning goals for the lesson, then facilitate and sometimes make suggestions for ideas for possible student choices that best related to the learning goals, proactive considerations in providing them, and criteria for assessing learning.

Finally, Ann and I did not always have time to meet in person for planning sessions before every observed lesson, nor did she feel a need to co-plan all of them with me. For 3 of the 10 sets of observations, Ann simply told me of her plans before I observed the lesson and in response to my questions explained her steps in creating them. As it happened, having a record of her plans and planning processes without my intervention offered a useful point of contrast to the processes we employed together. When we did plan together for the other observed lessons, Ann never finalized her plans until after the meeting and she alone made the final decisions about her goals, assessment, and activities.

Though we did not follow the original protocol for co-planning, the planning processes that did occur resulted in the same end that the protocol was designed to achieve. Ann was the primary initiator and final decision-maker in all planning for the observed lessons. I was able to document, support and facilitate her planning.

Working

The *working* phase for Ann consisted of teaching the lesson. For students it consisted of undertaking chosen activities or processes. For me, as facilitating researcher, this was the *looking* phase in which I worked in the role of observer as participant, document collector, and interviewer, then transcribed audiotapes and wrote expanded field notes.

Mid-year, after the sixth observed lesson, I offered to take primary responsibility for planning and teaching a lesson because Ann was continuing to have difficulty shifting her focus for planning and implementation of student choices from activities and products to learning goals and the processes

that lead to learning. This was inhibiting her growth and that of the students in regard to choice provision. My hope was that having a different approach modeled, beginning with the planning process and continuing through the implementation and reflection phases would enable her to take a major step in her own understanding and implementation of student choices. Between the seventh and eighth observed lessons implemented by Ann, I took a turn in Ann's role. Ann selected the lesson she wanted me to plan and teach and we discussed the goals, assessment and ideas for activities together. I, then, finalized the plans on my own and e-mailed them to her for final approval before teaching the lesson. During the lesson, Ann observed as I taught and then we reflected on implementation together. After that we returned to our previous roles and activities with Ann incorporating some of what she had observed into her own work with choice provision.

Reflecting

The *thinking* or *reflecting* stage involves systematically looking back upon experiences relevant to the topic of study. In this stage learners explore and analyze what happened, and then make interpretations as to why it happened as it did (Stringer, 1999).

For me, as facilitating researcher, this stage consisted of analyzing the data each week after I collected and transcribed it, and keeping a log and memos of my thoughts about the data collection process, the data, and my interactions with students and teachers. The reflection step for Ann consisted of informal interviews with me soon after the implementation of observed lessons.

Students reflected on choice activities using a structured format of Ann's choosing after each choice experience. These formats included teacher led discussions about successes and difficulties, students' self-evaluations of their work according to teacher-developed criteria, and open-ended written reflections in response to teacher generated questions. After three of the observed sessions, five students also reflected in post-instruction interviews with me.

Data Analysis

Data analysis was inductive using the constant comparison method (Strauss & Corbin, 1998) for developing grounded theory. This methodology was particularly useful for finding answers to my research questions because it enabled the generation of contextually based theories that are sensitive to

"the evolving and unfolding nature of events...[and] an awareness of the interrelationships among conditions (structure), action, (process), and consequences" (Strauss & Corbin, 1998, p. 9-10). In keeping with the mode of action research, grounded theory offered a conceptual framework for planning and understanding any future action that grows out of a synthesis of theory and practice.

Immediately after each round of observations and interviews, I transcribed all new audiotapes and typed field notes. These, along with any documents collected were saved on my computer and back up discs, each filed according to the number of the observed lesson or unit they documented. The first observed lesson was "Observed Lesson 1", for example; the final social studies unit I observed was called "Observed Lesson 10". In-depth teacher interview transcripts and recordings were filed according to when they occurred; initial, mid-year, or final interviews. In addition, I recorded the time, place, and nature of my research activities in a log along with notes on the nature of my interactions with Ann and the students, my first reactions to what I had seen and heard, any changes I had made in my initial plans, and my reasons for doing so.

Within days of completing each set of transcripts and field notes, and downloading and filing documents, I conducted a round of initial data analysis. First, I read them to gain an overview of the data. I recorded my thoughts as they occurred in memos, and then wrote a brief summary of my sense of "what is going on here?" (Strauss & Corbin, 1998, p. 45). For this first response to the data I allowed myself to respond to what I had seen and heard from my personal perspective, which often meant critically and evaluatively, especially for the first rounds of observed lessons. Ann often used very different approaches to teaching than I would have. Being able to express my personal responses to observations privately enabled me to clarify aspects of the lessons that made me uncomfortable. For example, after Observed Lesson 1, I wrote,

> The kids had no idea what a study guide is or how to make or use one. No wonder they almost all chose index cards. This option was introduced with the most information and enthusiasm – though not enough info for them to truly know what they were getting involved in. Once it was clear that many were choosing it, others joined in until only two boys were left. (Memo, Observed Lesson 1, October, 8, 2003).

With my biases named, I was more aware of them. I could examine them with a more objective eye. Once I had expressed my personal responses to the data, I was better able to bring a

broader vision to them, cultivate a perspective that was more open and empathic with Ann, and develop alternative interpretations of events. In the written reflections that I shared with her about that first observed lesson my tone was different. I listed positives such as:

> +Your story about index cards was a powerful motivator. Their response to it indicates to me that they truly want to do well in school.
> +You were proactive about having the kids think about what they needed to bring with them when they began work (Reflections, Observed Lesson 1, October 10, 2004)

I noted the areas of difficulty that Ann had named, herself, and used a less judgemental tone:

> You commented on how busy you were and how you could not have done this without the two other teachers. I would like to think about (and experiment with) a way to achieve the same benefits of this lesson without needing three teachers for success, if that's ok with you. I am intrigued because it seems like a kind of lesson that many teachers could really use, but not if it relies on more than one teacher! I have some ideas and I'm wondering if we could get together to think and plan before the next big test? (Reflections, Observed Lesson 1, October 10, 2004)

Next, I conducted microanalyses on a few words or phrases in the set of data that seemed particularly telling or that raised important questions or confusions for me and wrote research memos (Strauss & Corbin, 1998). This technique helped me to develop awareness of potential patterns and alternative interpretations that my initial reading may have overlooked. Then, in light of my initial overview and subsequent microanalyses, as well as categories developed in prior rounds of analysis, I downloaded the data into QSR N5 software for qualitative data analysis and conducted open coding on the entire set of data. I made code notes on any new categories identified since the last round of analysis.

At this point in the analysis process of the first in-depth teacher interview in August, I proceeded to the next step of axial coding (Strauss & Corbin, 1998) in order to develop an initial paradigm for Ann's understandings and practices related to choice provision. I organized the categories arising from open coding into broad categories and sub-categories. For example, I saw that I had open codes for "products" that referred to Ann's references to academic products such as student projects or tests, for "assessment" and "practice" that referred to references to ways to use academic choices, and for "student weaknesses" that referred to references to Ann's considerations when including choices in the curriculum. These all became sub-categories for the category of "Defining

AC" which referred to Ann's understandings about the importance and use of academic choices in her curriculum.

After the initial organization of the categories I developed properties and dimensions for the categories. For "products", for example, I created the continuum of products – processes as a more complete consideration of the possibilities for a teacher's focus when developing and implementing lessons. I considered properties and dimensions of products and processes of learning: (a) prescribed versus open-ended, (b) student generated versus teacher generated, (c) single modality versus multiple modalities, and (d) including narrow versus broad choices.

When I began analyzing data from the observed lessons, I continued the cycle of developing an overview, then microanalysis, to generate possible new categories, properties and dimensions, followed by downloading the data into QSR N5 and open coding each new set of data. I used codes generated by past analyses as well as new codes that I developed during the initial reading and microanalyses. I then made notes in a research log about any new codes developed. I also noted information to share with Ann in our next meeting and any ideas for next steps I might facilitate in her use of academic choices depending upon her stated goals and concerns in our next meeting. The cycle of planning, implementation, and reflection would then begin again.

For the month of January I did not observe new lessons, but focused instead on making comparisons across data from the observed lessons and interviews and doing more axial coding among them. I expanded and reorganized the coding scheme developed after the initial interview to incorporate my analyses of the data collected during the fall and I noted any apparent trends in changes in Ann's understandings and implementation and in student outcomes over time.

In February the cycle of data collection and analysis began again with a mid-year in-depth interview of Ann and continued in a manner similar to that of the fall. I followed the same sequence of analysis for the mid-year interview as for the initial one, and compared them to one another. For the final five observed lessons I continued to first read the data and write overviews of what seemed to be happening. I only conducted microanalyses for three of the five sets of data. This occurred when certain data intrigued or puzzled me or seemed to indicate information that did not fit into my

developing categorical schemes. I continued to use QSR N5 software to code the data and to compare coding patterns across different observed lessons. In this way, I continued to develop established categories and look for previously unidentified ones through microanalysis and open coding as I collected data throughout the spring.

After observing 10 rounds of academic choice lessons or units, I began the process of selective coding. (Strauss & Corbin, 1998) by reviewing my data and coding paradigms, then writing a storyline to describe my understanding of what had happened in Ann's classroom over the course of the year. From this I was able to identify a central theme and organize identified categories within it. In light of this framework I conducted a retrospective analysis of my data and memos to see whether it offered an apt and thorough explanation for the raw data. I also sought negative cases that would raise questions and provide more complete development of the central theme and its supporting framework. I created a chart of findings for key categories for each observed lesson (see Appendix J) to more easily compare the lessons to each other and see patterns among them. Finally, I conducted a final in-depth interview with Ann designed to gather information that would confirm or disconfirm my findings. I conducted selective coding after transcribing it. Data from the final interview allowed me to further develop some categories and make some final adjustments to my organizational scheme.

Establishing Trustworthiness

The trustworthiness of this study was enhanced by several means. (1) Engagement in the study was prolonged as I collected and analyzed data over the course of an entire school year with a series of 10 planning, observation, and interview cycles in addition to three in-depth teacher interviews (Merriam, 1998; Miles & Huberman, 1994; Stake, 1995). (2) I triangulated the data by drawing upon multiple sources including observations, interviews, and documents (Merriam, 1998; Miles & Huberman, 1994; Stake, 1995). (3) As my findings began to solidify into well-developed categories within a central theme, I purposely searched for negative cases (Miles & Huberman, 1994). (4) The collaborative nature of the planning process for the observation cycles also provided a balance of viewpoints and a check for my perceptions and understandings (Miles & Huberman, 1994). (5) In keeping with recommendations for qualitative researchers (Merriam, 1998; Stake, 1995), I utilized

frequent member checks, which Merriam defined as "taking data and tentative interpretations back to the people from whom they were derived and asking them if the results are plausible" (p. 204). Ann provided member checks of my interpretations of data for each observation cycle and for the three in-depth interviews as she responded to my interpretations as articulated during interviews and planning and reflection sessions. She also read a draft of my results for the study and responded with her thoughts and feedback, which I incorporated into the final results.

Considerations in Establishing Trustworthiness

Small Number of Participants

That this study is limited to one urban, fourth grade teacher and her students is an important factor when considering the external validity of the findings. Ann is typical of many elementary school teachers in that she is a white middle class female, but her eagerness to learn and willingness to take constructive risks may be less typical. The amount of support she received to develop her use of academic choices was not typical of that received by most teachers. The demographic makeup of the students is fairly typical of those in many urban classrooms, but here again, it is not possible to determine many of the factors that may have uniquely influenced them both inside and outside of school. Whether other teachers and students will tend to follow similar paths and rates of growth in their development and experience similar contextual factors and student outcomes remains to be seen.

Limiting this research to one case also provided strengths and possibilities that would be difficult, if not impossible, to obtain with a larger set of participants and more cases, however. I had the opportunity to identify and study a multitude of complex and inter-related factors, thus providing a more detailed and realistic picture of the contexts and directions of change and growth in regard to choice provision in a classroom over time. "In qualitative research, a single case or small nonrandom sample is selected precisely *because* the researcher wishes to understand the particular in depth, not to find out what is particularly true of the many." (Merriam, 1998, p. 208) The richness of the data gleaned from this one case offers solid ground for findings that rest upon many complex, concrete experiences. Thus, the research provides generalizabilty in the form of "concrete universals" or

"reader generalizabilty" (Merriam, 1998, p. 210) when the reader applies the details of this case to the details of other cases and discovers similarities that indicate that the same patterns may be at work.

Racial and Cultural Differences

Ann and I, as middle class, college educated women do not share racial, economic, or cultural backgrounds with many of her students. This provides another important consideration when regarding the validity of the study's results. We may not have interpreted language and behaviors in the way that they were intended to be understood. Additionally, as explained previously, it was difficult to obtain interviews with students on a regular basis. When I did interview them, I found communication difficult. This may have been a result of cultural differences, prior experiences with adults or schools, or a combination of these factors. Despite my efforts to create an atmosphere of comfort and safety, and their evident pleasure in being singled out for an interview, the children were tense and wary when I interviewed them. They seemed to find it difficult to express thoughts and feelings about their choice work. Responses to my questions often came in the form of brief phrases, with "I don't know" typical of responses when asked for elaborations or explanations. Often their responses seemed to be intended to please me rather than to express autonomous thoughts and experiences. This was also the case in their interactions with Ann as I observed them. For these reasons, the usefulness of student interview data was limited. When considering student outcomes, my findings were primarily based on Ann's reported perceptions and my observations of the children during class sessions.

CHAPTER 4

RESULTS

Introduction

The cycles of learning and action research that structured the processes of this study led to growth in both knowledge and practice of academic choice provision for me as researcher and for Ann as instructor. An inter-related set of contextual factors greatly influenced the nature of Ann's work and its outcomes as well as the types of problems that arose in practice and Ann's interpretations of key concepts related to academic choice provision. These contextual factors included (a) time pressures, (b) high stakes testing, (c) required curricula, (d) students' prior knowledge, and (e) teacher support. Ann's development of academic choice provision was characterized by her efforts to find and enact an optimal balance between student and teacher input into learning and instruction. Within this central theme I identified three issues that describe key aspects of Ann's efforts as they evolved over time: (a) using academic choice as peripheral versus integral to the regular curriculum, (b) emphasizing student products versus student processes, and (c) nurturing student dependence versus student independence. Student outcomes included (a) positive engagement in choice activities, (b) improvements in the quality of academic products produced during lessons involving academic choices, (c) some tendency for an improvement in the quality of student interactions, and (d) unclear outcomes for the effects of academic choices on student learning.

This chapter will provide more complete descriptions of these findings, beginning with a description of the cycle of research and learning in action and the contextual factors that influenced Ann's developing understandings and practice, followed by descriptions of those understandings and practices. The chapter concludes with descriptions of the outcomes of Ann's provision of choices as perceived by her and corroborated by my classroom observations.

First Steps Toward Balancing Student and Teacher Input: The Action Research/Learning Cycle in Action

I began my first interview with Ann by asserting that I was neither working with her as an authority on the best ways to use academic choices in her classroom, nor as an evaluator of her

implementation of this strategy. Rather, I was there to learn how she went about developing her use of academic choices given my support and facilitation. She was the authority on this topic. I told her that while I would share my observations and other data I collected with her, ask questions, and make suggestions, all final decisions about how she would go about implementing academic choice lessons were up to her. I described the learning cycle we would use to structure our work together and with the children. This cycle created a powerful framework for promoting Ann's shifts in understandings and practice of academic choice provision as they evolved over our year of work together. A description of one full round of this cycle in action with a focus on the researcher and teacher levels of its enactment and how it worked to lead to changes in teacher practice follows. (See Appendix I for a schematic diagram of this Cycle of Learning for the Facilitating Researcher, the Teacher, and the Students.)

Researcher Looking – Teacher Planning, Practicing, and Reflecting

Ann made her first attempt to use academic choice with a lesson in which she asked students to brainstorm ideas of all the different ways they might make study guides for their upcoming mathematics test. To make their guides, the children needed to work in three small groups each directed step-by-step by Ann or one of her two mathematics teacher assistants. In her reflection on this lesson, though she was pleased with it overall, she said, "My first impression was tons of work. I was busy, so I can't imagine doing it with eighteen kids by myself' (Interview, 10/8/03). She also noted that, "I think in the beginning you have to teach them how to do certain things. I think they have no idea what to do" (Interview, 10/8/03).

Researcher Thinking

In my analysis of data collected from this round of implementation, the children's dependence upon Ann both for deciding what to do and then to do it successfully stood out as an issue. Based on Ann's reflections on that lesson and my own initial analysis of the data, I decided that I would highlight Ann's concerns about the teacher workload and her students' lack of prior knowledge about study guides to see if we couldn't find some ways to address those concerns. With this decision, I moved from the think phase into the act phase of the action research cycle as I began to plan for the

next choice lesson with Ann. Ann moved from the practice then reflecting phases into the planning phase of the learning cycle.

Researcher Acting – Teacher Planning

The following description of my planning session with Ann is taken directly from my transcripts and notes from October 8, 2003. When we met to plan the next academic choice lesson Ann began by informing me that she wanted to plan this lesson for her science class. She also said that though her last choice lesson was an attempt to use academic choice as a way for students to learn, she was really more comfortable with using it as a way for them to show what they have already learned. She wanted to give the children choices about how to show what they knew about three of six key concepts in their recently completed science unit on "Change." In this way Ann took leadership in the planning.

I asked what that lesson might be like. Ann explained that students could be required to show information from the unit in a variety of ways. Acting upon my plan to focus on developing students' prior knowledge and independence related to choice work, I asked Ann what ways they could show their knowledge that they had already experienced in class. Ann immediately came up with two ideas – creating posters or writing a report, but couldn't think of a third option that seemed to apply. I remembered that Ann had students use some poetry formats to share information about themselves in the first few weeks of school and asked about that. She agreed that they all had made acrostic poems and that could be an option for sharing information too.

Once we'd identified 3 options, it seemed this would be a workable choice lesson. I guided Ann through the planning process by asking for her ideas for each step (such as articulating learning goals, determining materials needed, and deciding how student work would be evaluated) and made notes on her responses. As I wrote down the choices she would offer, I raised one potential problem: "What if a student chooses to make a poster, then just makes one like the one he or she made before?" (They had already made posters showing 3 required concepts in this science unit.) Ann said, "I'll require that at least 2 of three concepts shown need to be different from the first posters" (Interview, 10/8/03). I recorded that requirement with the poster option.

When it was time to list the materials, I asked Ann to think about what she wanted them to use for the reports and acrostics. She talked about how some needed lots of help to use rulers to make straight lines on unlined paper and I suggested that she could simply restrict them to lined paper for this lesson or take the time to teach them to use rulers. She opted to restrict students to lined paper. I also asked her to establish what drawing materials would and would not be allowed. Ann immediately listed markers, crayons, colored pencils and water-color paints, and then began to discuss the difficulties with using water-color paints. I suggested that she might simply tell them they could use markers, colored pencils, or crayons, or she could have them practice using the watercolors before offering them as an option for this lesson. Ann decided to omit watercolors as a choice due to time constraints.

At my request, Ann also generated a list of criteria for good work to be shared with students, and then I asked her to consider what might not work well with this lesson. She suggested that a problem could be that some students wouldn't make her deadline and I asked what she could do to help minimize this problem. Ann decided she would make an assignment guide that students could take home for parents to see so it would be easier for them to help their children if they needed it and support them to meet the deadline - since this work would mostly be done as homework.

In this phase of the cycle I functioned as a supporter of Ann's initiative and ideas as I followed her lead and as a facilitator as I primarily asked questions that would guide the direction of her planning to account for areas of concern that Ann and I shared. Direct suggestions were few and presented as choices. My support and questioning helped Ann begin to develop practical approaches for addressing discomforts and concerns that otherwise may have overwhelmed her motivation to learn this skill. The resulting shift toward a more proactive approach to planning and facilitating greater student independence in completing their work occurred as a synthesis of Ann's practice and subsequent reflection and self-initiated planning and my looking, thinking, and then acting to support and facilitate Ann's self-perceived areas for growth.

Reseacher Looking – Teacher Practicing

As Ann began the practice (or implementation) phase of her cycle, the children began their planning phase. Ann introduced the lesson to students and provided examples of each of the ways students could show their knowledge about their select science concepts. The children listened and made their decisions. The working phase for students consisted of creating a poster, poem, or report and occurred largely outside of the classroom as homework. Once the projects were done reflection on their work occurred as children shared aspects of their projects of which they were most proud with classmates and completed self-evaluations of their work. I observed the children at work and photographed their projects, and collected samples of their self-evaluations.

Researcher Looking and Thinking – Teacher Reflecting

The round of teacher reflection and researcher analysis that followed led to the conclusion by both Ann and myself that students were indeed working with more independence, but other concerns surfaced. Ann was most deeply concerned about the quality of the products that her students completed. She noticed that many projects contained inaccurate information and were sloppy and incomplete as well (Interview, 11/5/03). From too much need for teacher input in lesson one, it seemed there had been too little support for students as they worked on this most recent lesson. These reflections led to another cycle in which attempts to bring an optimal balance to teacher and student input narrowed the aspects of the lesson for which students had choices, but increased the accuracy of student work while maintaining the higher degree of student independence established in the prior lesson. In this way the cycle of research and learning continued to support Ann to build her knowledge, understandings, and skills.

Contextual Factors

Contextual factors affecting Ann's academic choice provision were (a) time pressures, (b) high stakes testing, (c) required curricula, (d) students' prior knowledge, and (e) teacher support. Taken together, the first three inter-related factors characterized a school environment in which forces largely external to the teachers and students themselves defined and demanded particular content and outcomes for teaching. In contrast, choice provision requires that teachers and students have input into

teaching and learning. Students' prior knowledge was identified as a central factor in the outcomes of academic choices early on and continued to shape planning and implementation throughout the year. Teacher support served as some counter-balance to these factors. Ann's efforts to find an optimally productive balance between teacher and student input into learning activities and her perceptions of the benefits and limits of academic choice provision were greatly influenced by each of these contexts.

Time Pressures

Concerns with a lack of time surfaced repeatedly in planning, implementing, and reflecting sessions with Ann. Time restrictions due to school schedules often frustrated her. Ann also found that academic choices required more time to plan and to implement.

School Schedules

"I'll admit to you this time thing is driving me crazy. It's like there's no time to do anything well. I just feel like I'm boom, bam, bing!" Ann said in a reflection session on November 5, 2003.

Time requirements were increased to 2 hours a day for reading instruction and to 1½ hours a day for math instruction at the beginning of the school year due to concerns over students' performance on the statewide Massachusetts Comprehensive Asssessment System (MCAS). Although Ann appreciated having more time for these subject areas, the change necessitated a comparable decrease in the amount of time allotted to science and social studies instruction with no decrease in the amount of content teachers were expected to teach. Ann and her colleagues on the fourth grade team were left with 35 minutes a day in which to teach the year's content for both social studies and science. Ann told me, "You may need two more hours [a day] to do what they want you to do well" (interview, 11/5/03)

A sense of pressure to address a large amount of content in a small amount of time often dominated our planning and reflection sessions. For example, after her first attempt to use academic choices in a science unit Ann reflected on why her students' work was not up to the standards she expected of them:

> I think it's the rushing. . . . I don't know if I've treated the curriculum fairly for them to understand it. I'm trying to really highlight what I think is most important in the curriculum and teach it in an efficient way and get the most across in the time frame I have. And it's not easy. It's not working! (Interview, 11/5/03)

In her efforts to juggle a balance between an emphasis on students' processes for learning and the products of learning, tight schedules tended to influence Ann to shortcut processes and focus on products. Teacher input dominated at those times. She laughingly described some of her current science instruction on geology and rock formation as follows:

> Before, I would spend 3 days on metamorphic rocks. . . . And now I'm doing it in 1 day. Here's a piece of limestone. This is marble. See? Used to be. Here it is. Here's some shale and here's some slate. See? Used to be this. Now it's this. Here's the definition. Get it in your books copied up! (Interview, 11/5/03)

Departmentalization in the fourth grade also contributed to scheduling pressures that directly affected Ann's planning and implementation of academic choices. Each of the four teachers on the fourth grade team had a homeroom group with whom they began the day. After that, students were grouped according to ability level for mathematics and language arts instruction, and they moved to the classroom of their designated teacher for these subject areas. Homeroom groups remained together for science, social studies, Spanish, music, and art instruction, but the teachers changed. During the fall, Ann taught science to her homeroom group and the homeroom group of another teacher who taught social studies to Ann's homeroom group. Except for the morning meeting, this was the only time she worked with her homeroom group. Departmentalization meant that established schedules were inflexible. Instruction must stop at the pre-appointed time, even though Ann often saw ways she could have made her academic choice lessons more productive with a little more time for preparation or closure. In the mid-year interview (2/4/03) Ann explained this pressure:

> With my schedule being tied to other people – not having the freedom to say, this is my room, I will have my day. If I need 20 minutes into my math time, that's okay, [and] I don't have anyone at my door, waiting for me to change. I mean I am on the minute schedule. . . . I think if a person had their homeroom all day . . . it would be very different.

One other influence of rigid schedules and departmentalization on the time factor had to do with Ann's concerns that student needs for informal interactions and breaks in the working day were not being adequately met. She felt that she was continually rushing them, despite her awareness that this made it hard for the children to focus their best energy on learning. As Ann expressed it:

> I mean they come back from math and I'm saying, 'It's time to go to lunch. I know they want to come back and they're talking. And I say, 'We can't have all these little groups of people

> talking', but I feel like, well, they need to! They haven't had time to, you know? They need a break! (Interview 11/5/03)

Not only were students rushed through the many transitions, they also rushed through lunch and recess. There was no time allotted to recess in the official schedule for these fourth graders. A teacher voluntarily cut her own lunch break short and stationed herself outdoors so that any students who had finished lunch could come out and play for the last 15 minutes of lunch time. Students rushed through lunch in order to have recess (Interview, 10/29/03).

Academic Choice Takes More Time

During the mid-year interview (2/4/04), Ann told me:

> I'm doing it [providing academic choice], but I don't think I'm doing it as often. I'm actually really feeling the pressure of getting through certain parts of the curriculum for the test. And I think choice takes more time. I can't afford – I don't feel like I have that kind of time to give. . . . They have to be so far in math so they at least have a chance of doing well. They've got to get fractions. They've got to get decimals.

For students to make successful and meaningful choices, Ann found that more time must be given to planning, to the preparation of students for independent work, and to the implementation of choice activities. The more all these aspects of choice provision were addressed, the more satisfied Ann was with its outcomes. Each aspect required time, however, that she often did not feel she had.

Ann was highly aware of and frustrated by the shortcuts that she took due to time pressures. "Should do it better, but don't," she said (Interview, 2/4/04). As the year passed, she became increasingly emphatic that in order for academic choice provision to be successful, her students needed to be able to move from dependence upon her to independence. Planning ways to address the need for the background knowledge necessary to that independence and then implementing the plan took more time than simply following the lesson plans offered by her teachers' guides or using other approaches with which she was more familiar. After a science lesson for which students had chosen how they would present information to the class, for example, Ann discussed the fact that she was dissatisfied with the quality of knowledge presented and related the problem to lack of time in the schedule.

> I think I really should have given them more direction on how to really get information so that they could become experts. . . . I could have maybe gotten the computers and we could have gone on the Internet and I could have had sites available where they could have gotten information. . . . Here we are back at that time issue again. It keeps on biting me, you know? (Interview, (11/24/03)

High Stakes Testing

Pressure for students to do well on the statewide Massachusetts Comprehensive Assessment System (MCAS) drove the schedules and required curricula that framed Ann's teaching day. Students took the tests in mathematics and in reading and language arts in the spring. Test scores are published and used to make important decisions about school governance and rates of funding. Ann often spoke about the MCAS as an important factor in her decisions about what and how to teach. If students don't do well on the MCAS, she said, "Your school is in jeopardy. It's going to be taken over. It's an underperforming school! Principal can fire you. . . . I mean, the ramifications of this test!" (Interview, 4/24/04)

For the subjects that would be tested on the MCAS that year, reading, language arts, and mathematics, Ann did use academic choices for some of the lessons, but the choices tended to be narrower than they were for science and social studies (Field notes, 10/8/03; 11/6/03; 3/25/04; 4/1/04). She felt that she must at least touch upon such a quantity of content "so they at least have a chance of doing well" that she must deliver it quickly in more teacher-directed ways that did not allow for academic choices. I asked Ann whether she thought that "dropping academic choices and moving faster through the curriculum actually gets them more prepared". Her response:

> I don't know. Now you've got me thinking. . . . I think like with math where there are so many concepts that need to be covered . . . when you have to learn to multiply by three digits or something, you have to learn to multiply by three digits! I think it's easier to do [with direct teaching] than with academic choice. (Interview, 2/4/04)

In the subject areas that were not to be tested in fourth grade, science and social studies, Ann was much more comfortable with experimenting with greater amounts of student input into learning activities. "I'm behind in social studies, but I don't feel that pressure, because the social studies MCAS, I think the fifth grade is going to have it, not next year, but the following year" (Reflection session, 3/24/04). The broadest choices about what and how to learn and how to express learning were offered in science and social studies (Field Notes, 11/3/03; 11/17/04; 11/9/03; 2/9/04; 5/10/04) and Ann also expressed the most enjoyment of and satisfaction with the lessons that included choices in those subject areas (Interviews, 11/24/03; 2/4/04; 2/25/04; 5/26/04; 6/9/04).

Required Curricula

In response to poor student results on the MCAS in much of the district, citywide curricula were developed based on statewide Curriculum Frameworks that were in alignment with the tests. Teachers were expected to follow them on schedule. "Our whole curriculum in this city is like that," Ann told me. "Everything. Here's your math. September, teach this in fourth grade" (Interview, 11/5/03). Much of Ann's sense of time pressures came from the expectation that she address a large amount of curriculum content in less time than was necessary for children to develop a true understanding of it.

The power of the MCAS was evident in the way that the required curricula were developed. The developers' expectations of what would be on the test guided the scope and sequence. For example, Ann reported the following procedures for developing the mathematics curriculum:

> In math, they supposedly analyzed the MCAS [results] and analyzed weaknesses and strengths. They found a way that they thought it worked better to teach it as far as what chapters you should go first and second. Of course, the minute we saw it, we put holes through it all. Because, wait a minute! You have me subtracting, but I haven't taught numeration yet! (Interview 11/5/03)

Ann also referred often to the sheer volume of information that she was expected to teach in each subject area. "The social studies curriculum, it's just so mammoth!" Ann said. "There's no way you can get it all in. We have to cover the whole country and Canada and Mexico, then something on ancient China, if we can fit it in," she laughed (Interview, 2/4/04). The required curricula reinforced the pressure to address a large volume of information, which seemed to be generated by the MCAS and led to a sense of always being behind and short on time. Though much of the required curricula also were intended to use child-centered, hands on approaches to learning, Ann often felt pressured to drop such process centered approaches in favor of just "getting through" the content (Interview, 11/5/03; 2/4/04; Field Notes, 11/18/03; 11/19/03; 2/26/04). The nature of the curriculum created pressure to sacrifice time needed to develop and emphasize the processes of learning in order to have time to cover the content and produce products.

Students' Prior Knowledge

> Some of the kids . . . who have not had any kind of strategies they can count on or know they are good at -- that is really hard. [They think], 'I can't take ownership of it because I don't know how to do it.' You don't know where to begin. (Ann, interview, 2/4/04)

The presence or absence of certain skills needed to engage in a variety of activities with independence and initiative had a strong impact on the nature of Ann's development of her use of academic choices during the year we worked together. She was often surprised to discover that skills she had been able to assume her students possessed in the past were not present in many of her current students Interview, 11/5/04; 2/4/04; 3/24/04). She found that she frequently needed to backtrack and provide instruction and practice in basic skills before the children were prepared to have good ideas, make productive decisions, and work with independence. In the mid-year interview (2/4/04), Ann said:

> The more I've thought about this the more and more I believe you just have to teach them so many things, so they have a repertoire. I mean my math group – I have kids that don't know the value of a dime and a nickel! So then, academic choice? I can't believe it! I've never had kids in fourth grade not know the value of a dime and a nickel!

When working with her mathematics and reading groups, both of which consisted of the fourth grade students with the fewest skills in these subjects, Ann did provide many lessons that included academic choice, but the nature of the choices was more restricted than those for her mixed ability science and social studies classes (Field Notes, 10/8/03; 11/6/03; 4/25/04). Ann regularly offered students in her reading group a choice of ways to respond to their reading through journal writing, for example (Interview, 3/24/04; Field Notes, 4/1/04). She found that given five choices of how to write about what they had read (relating the text to another text; relating text to personal experiences, relating text to world events, summarizing the text in a paragraph; and listing 10 important facts from the text) most students repeatedly chose to either list facts or write a summary (Field notes, 4/1/04; Interview 4/8/04). They did not take advantage of the other options. Although Ann felt that having the choices still offered benefits for the children's sense of empowerment and motivation, she noted that their lack of reading skills imposed limitations on their willingness to try out any options but those that seemed easiest to them. Referring to the text students were reading, she said:

> Oh, I could tell they were struggling with it. I went around and did the guided reading with them. Oh my God! So how can you choose a way to write about it when you don't even understand what you read? (Interview, 4/8/04)

Even with her homeroom group that included many academically capable students, Ann began commenting early in the year about gaps in their skills that surprised her. She found she needed to teach them how to use a ruler to draw straight lines, for example (Interview, 9/10/03). These gaps she attributed more to lack of prior experiences than to lack of abilities. She also commented on students who lacked organization skills, which were crucial to the ability to choose, plan, and complete independent work. In general, a lack of prior skills limited the types and amounts of academic choices that Ann felt comfortable offering. She became committed to addressing the gaps through instruction, but the time needed to do this meant less time for the academic choice activities themselves.

Teacher Support

Ann reported that she enjoyed taking advantage of a variety of professional development opportunities offered in her district, but she also noted that the kind of ongoing coaching, structured reflection, and support that I was able to offer her for this project was highly unusual. The district provided the initial training in Responsive Classroom® approaches including basic information about academic choice provision. Her principal gave her the leeway to try out the new ideas she learned in the workshops. It was the ongoing support from me that was brought about by her participation in this study, however, that she found to be the most helpful in her development of academic choice provision. When asked what most helped her reach her goals for learning to provide effective academic choices, Ann responded:

> You coming in. If you didn't come in and make me do it I probably wouldn't have done it. . . . You have to do it a lot to get there; practice. You never said anything I did was wrong, so questions from you and reflection. And we planned together, so you took me through the process of academic choice. We were planning, we were doing, then we were reflecting. (Interview, 6/9/04)

This kind of teacher support, ongoing, non-evaluative, reflective and collaborative provided a powerful antidote in the face of contexts that worked strongly against teacher experimentation and growth in the development of greater student input into the curriculum. Many contextual forces pressured Ann to stick with a highly teacher directed, product oriented curriculum, which encouraged

student dependence rather than independence in thinking and action. Despite these forces, she managed to grow and develop in directions that fostered increasing student direction, emphasis on the processes of learning, and greater student independence.

Understanding and Practice of Academic Choice Provision

Finding an Optimal Balance Between Student and Teacher Input Into Curricula

Ann began our study expressing concerns with finding a balance between teacher and student input into classroom activities (Interview 8/21/03). She valued opportunities for students to have input into certain aspects of their experiences at school, yet she was concerned that too much student input would take time away from covering the enormous amount of content she needed to teach. The negotiation of this tension between student and teacher input continued to characterize her efforts as she developed her understanding and practice of academic choice provision over the year of this study.

In the initial interview (8/21/03), Ann described the importance of student choices as a way to empower children and characterized empowerment as allowing children to do what they want to do and have "great self-esteem because they're happy with what they've done." To this, Ann quickly added:

> I do think though that they have to be forced to do things sometimes. . . . they are going to get to high school and, you know, you've got to read this book! And you have to answer this in essay form, or you have to write a term paper. So I think it's a balance. I think that it can't always be academic choice.

Ann wanted to develop better ways to negotiate that tension between student input into learning, which she believed led to happier and more self-confident students, and teacher input, which she believed led to increased learning. In that first interview (8/21/03), she told me:

> I would hope that [academic choice] would also allow them to learn in a better way or learn something new too, because they should have a choice of how to learn. . . . I'm not sure if academic choice means just total freedom for this child to learn. I don't think so. I think there's got to be some guidelines and structure within it. I'm going to play with it.

This commitment to "play with it" guided our work together for the rest of the school year.

Explanation of Sub-Categories

Within the central theme of finding an optimal balance between teacher and student input, I identified three sub-categories that delineate important issues in Ann's understandings and practices

as they evolved: (a) using academic choice as peripheral versus integral to the regular curriculum, (b) emphasizing student products versus student processes, and (c) nurturing student dependence versus student independence. Within the category of dependence versus independence are categories of (a) teacher roles, (b) teacher movement, and (c) student interactions. Types of choices offered is another category of findings that played an important role in all aspects of the development of choice provision over the year. The impact of types of choices on teacher development of academic choice provision and student outcomes will be addressed within the contexts of the other categories of findings as relevant. Each of the categories named are described below.

(A) Peripheral Versus Integral To the Curriculum

Academic choice was considered to be peripheral to curriculum when it was treated as an "add on". Its use was not essential to the content or processes of student learning. In Observed Lesson One, for example, students chose among methods of making study guides for test preparation after completing a unit in mathematics (Field notes, 10/8/03). Instruction was over. Choices were among different ways to organize material for review.

Choice was integral when it was considered an essential aspect of instruction that influenced the content and processes of learning. For example, in Observed Lesson Three (Field notes, 11/6/03), the children made choices of any number between 5 and 7 digits long that they would use as the answer to a riddle they would create. They also chose what types of clues they would provide for the number from a list of sentence starters provided by Ann. These choices were integral to a lesson on understanding place value for numbers up to 1 million.

(B) Emphasizing Products Versus Processes

An emphasis on products meant that the focus of teacher planning and work with students began with and focused upon activities and products produced as a result of instruction. There was little emphasis on the thinking that went into the completed product. For example in Observed Lesson One, students chose between three styles for making study guides. Ann directed children as to what information to include; the only choice was the format of the final product (Field Notes, 10/8/04). Later, in a student interview (10/8/03), the student proudly showed me her index card notes on the

uses for different kinds of graphs. Asked to explain her notes on line graphs, the girl said, ". . . you use line graphs for temperatures and stuff like that," reading from her notes. I asked if she could use a line graph "to show what people's favorite colors are." "I don't think so," she responded, then changed her mind. "Okay, actually you can! You could have blue up here and purple went down and first it was up and then it was down." The student had produced accurate notes in her academic product, but active experiences with the processes of reasoning and applying graphing skills to actual sets of data that would have provided true understanding of the information had not occurred.

When Ann's planning and work with students began with, and focused upon, clearly delineated learning goals and the procedures for meeting them, her emphasis was on processes. In Observed Lesson Seven the goal was for students to learn that ice melted at different rates depending on the temperature and to practice the scientific skills of observation and recording. Students chose where to place the ice that they would observe (Field notes, 3/8/04). Here the emphasis was on process skills.

> Ann demonstrated how to set up the thermometers using tape if needed to hold them in place to establish the temperature of the location where they had placed their ice. She instructed the students to stay where they placed their ice and wait to record what was happening every 5 minutes. She had S. model looking at the ice and writing on the recording sheet . . . . She told them they would each record their own ice cube and not check in with partners. She then listed the steps for getting started. (Field notes, 3/8/04)

(C) Nurturing Dependence Versus Independence

Student dependence was nurtured when the children tended to rely more upon teacher direction to complete choice activities successfully, and independence was nurtured when lessons were structured so that students could successfully complete activities by relying more on their own direction than on the teacher's direction for much of the session. In Observed Lesson One, for example, students were highly dependent upon Ann to know what to do once they had chosen the type of study guide they would make. As she worked with students who chose to use index cards, Ann directed:

> You guys could make your first index card your pictograph card, okay? You need your books for spelling. . . . I would put the title up here," Ann tells them, pointing. "I don't know, I think what I would do is put all my information about a pictograph, so I might do it like this." She demonstrates.

Ann watches as the children begin to write on one of their cards. As one starts to write, Ann points to another place on the card and says, "Right here, sweetie." (Field notes, 10/8/04)

In contrast, in Observed Lesson Six students worked with a great deal of independence.

The class was already at work when I entered the classroom at 12:30. Some were sitting alone, but most were working with one, two, or three others. Each student had an open textbook. They were looking in the book and writing information they found in lined notebooks. Some students were sitting on the floor in the meeting area and the rest were scattered around at the various desk groupings.

I first checked in with M. and I. They informed me that they were working together. They . . . had written the name of one of the five Mid-Atlantic states at the top of five consecutive pages. Below each state name they had vertically listed number 1 – 10. M. told me this was to help them keep track of how many facts they had found for each state. When I asked him why he had provided room for 10 facts he indicated that this was his decision. "I just thought of it." (Field notes, 2/9/04)

The teacher roles that Ann enacted during implementation of academic choices provided indicators of the degree of student dependence or independence, as did the nature of teacher movement about the classroom and the degree to which students interacted with each other during the activities.

(C_1)Teacher Roles

I identified five roles that Ann enacted during choice sessions at various times over the course of the year: (a) instructor, (b) manager, (c) coach, (d) facilitator, and (e) observer. In the role of *instructor* Ann interacted with students by giving them information or prompting recitations of knowledge. Sometimes she instructed through the straightforward delivery of information.

Ann wrote "recitation" on the board. She told them to look up a certain page in the book and see if they could figure out what the word was by using context clues. Before they had their books open Ann asked them to see if they could find a base word in the word. She then covered up "ation" leaving "recit" in their view. She gave them the pronunciation and asked what they thought the word meant. She then told them it meant, "to say". Next Ann showed the group the word in the chapter and had a student read the sentence containing the word. (Field notes, 4/1/04)

Other times Ann acted as an instructor when she asked questions that required the children to recite information for her. Her interactions with a small group that was creating a model to demonstrate erosion during Observed Lesson Four provide an example.

"How does snow and ice break down a mountain?"
The girls respond, "by the temperature?"
"Good. Now what does the temperature do?"
"Melts it?". . . .
"What happens when water freezes?" she asks them
"It gets bigger?"

> "What's the word for that?" Ann asks. When they don't respond, she says, "It expands." (Field notes, 11/17/03)

As *manager* she acted as an organizer and supervisor of student activities and as a disciplinarian.

> Ann warns the group it's time to wrap up and get ready to clean up from her chair. A minute later she is up walking around the room. She tells them to put their materials on the counter and the girl who has been cleaning and filling the aquarium puts it up there. While other children gather and put away materials, two boys chase each other around the room. Ann tells them, "You know what? I don't like that. Boys, get the paper towels and clean the desks. They have to be clean enough for reading. There are 2 minutes left for clean-up." (Field notes, 11/17/03)

When she fulfilled the role of *coach* she encouraged and directed student performance. For example, when students were preparing to present their chosen science demonstrations in Observed Lesson Four, she coached, "Do you have your bones? Do you have your water ready to pour on top of it? Go get a bucket. You have to pour water on top" (Field notes, 11/19/03).

As a *facilitator* Ann interacted with students in ways that supported their independent thinking and construction of knowledge. As students worked on their chosen social studies projects, for example, she asked about their strategies for finding facts (Field notes, 2/9/04). In another example, Ann responded to students in a facilitative manner when they shared a poster they were making about the Mid-Atlantic states with her. "Wow! That's a beginning!" she told them while she examined it. "Where are you going with it?" (Field notes, 2/23/04).

As *observer* she watched while children interacted with materials, others, and classroom tasks.

> M.'s list of facts was half done, neatly written in a numbered list format. Across from him, I.'s list was messy and shorter. They both worked steadily. K, who often had a hard time focusing on his work when observed last fall was at this table and sat quietly reading a library book and writing in his notebook. Ann sat at her desk nearby watching. After a few minutes she went and sat on a chair on the opposite side of the room and watched the class as a whole. She did not engage with any of them. (Field notes, 2/9/04)

(C_2)Teacher Movement

In terms of movement about the classroom, Ann might be stationary or circulating. When she was stationary, students focused on her as the director of their activity. She dealt with student

dependence by providing instruction to students who came to her for help or whom she had determined needed her help.

> Ann sits in a chair in front of the blackboard. She is surrounded by three girls and is showing them where to find information about their topic in a book. She then asks them questions about how erosion works. . . . Ann continues to question the girls while two boys look on waiting to speak to her. (Field notes, 11/17/03)

In contrast, later in the year, Ann was stationary as she responded to student independence by observing them as they focused on their work without her direction as described previously in the example for the teacher role of observer. When Ann was circulating, the children tended to be more independent than dependent as students focused on their work and she went to them to provide brief coaching or facilitation to individuals.

> V. holds a mineral (talc) in the palm of one hand, matches it to an picture of talc in a handout in oder to identify it, then reads the accompanying description. She checks each trait against those in her lab notebook. Shaking her head she moves to the picture of graphite and begins to read about its traits. Ann has been circulating among the children and now she comes to V's desk and watches her a moment. Seeing that V. is making an incorrect identification, Ann points out the traits of graphite that don't match those of the talc in V's hand. V. then correctly selected the graphite sample from among her set of minerals announcing with a big grin, "I know which one is the graphite now!" (Field notes, 12/10/03)

(C_3) Student Interaction

Students tended to interact primarily with their teacher when they were dependent upon her for success. They looked to her for clarification of procedures, information and help needed to complete tasks, and judgement of whether their work was satisfactorily completed. They brought their work to her for approval, asked for help, or simply followed Ann's directions (e. g. Field notes, 10/8/03; 11/17/03). When they were more able to succeed with independence from the teacher, the amount of interactions between students increased. They shared ideas, discussed the topic at hand, and provided help and advice to each other. They were less likely to ask Ann to judge whether their work was satisfactory and more likely to develop and discuss their own judgements of their work among themselves.

> S. draws four number cards and arranges them into a multiplication problem (58 X 91). First M. does some computation, then S begins to work on the problem too. "Wait a minute, I'm confused," he says. "Aren't we supposed to multiply first, then add to get the answer?" Both boys write and calculate, then check their answers with a calculator, which gives a different answer. S. begins to do the problem again from scratch. . . . [He] checks the answer again. It is still a different answer from his. "Maybe we did something wrong here," he says and re-

> calculates. . . . M. punches the problem into the calculator while S. watches. "We got it!" he announces. The boys slap five, then attempt to do a complex handshake. (Field notes, 3/25/04)

Types of Choices

As Ann experimented with approaches to offering choice, she employed types of choices that varied along a continuum characterized by their degree of open-endedness and by whether they involved a choice of processes, a choice of products, or both. Types of choices that I describe as *narrow* refer to less expansive, more prescribed choices that address only one or a few aspects of either processes or products. Narrow choices may also include open-ended tasks, but these are limited in scope. Examples of narrow types of choices employed by Ann include choices of numbers and clues for number riddles. The choice of a number was open-ended, but limited to numbers between 5 and 7 digits long and the exact wording of clues was open-ended, but limited to certain types of clues established by Ann (Field notes, 11/6/03). Other examples of narrow choices included which 4 of 12 minerals to study (Field notes, 11/9/03), or where to place ice to record how long it takes to melt (Field notes, 3/8/04).

Types of choices that I describe as *broad* refer to choices that include several smaller choices within them, are primarily open-ended in the nature of the tasks among which children choose, and are broader in the scope of academic content they address. Broad choices address many aspects of either processes, products, or both. Examples from Ann's work include choices among topics, specific information utilized, materials, and genres when children chose among science topics about which to demonstrate knowledge in Observed Lessons Two and Four (Field notes, 10/30/03; 11/17/03). Broad choices in social studies included choices of topics, specific information about which to read and report; materials to use as resources for learning and for reporting knowledge, and the materials and manner in which the knowledge would be shared with others (Field notes, 2/9/04; 2/12/04; 2/23/04; 5/10/04).

Appendix J provides an overview of the relationships between these categories both within and across observed lessons. Over the course of the year, Ann offered her students a variety of types of choices. The chart in Appendix J demonstrates that generally when the types of choices offered were

broader, the amount of student interaction increased. Further elaboration on the patterns in Ann's development of academic choice provison over the course of the year and the relationships among the types of choices offered and other categories such as teacher's roles, student interactions, emphases on processes or products, or integral or peripheral choices will be provided in the following sections. In general, as demonstrated in Appendix J, Ann's focus shifted from academic products alone to both products and processes over time. Her use of choices became less peripheral and more integral to the curriculum. Whereas Ann worked primarily in the most directive role of instructor in the fall, this role became more minor and the somewhat less directive roles of manager and coach became more important over time. By the final observed lesson which incorporated very broad choices, Ann's primary role had shifted to the non-directive one of observer. Ann also acted as a facilitator upon occasion beginning mid-year, particularly when the type of choice was broad.

Initial Understandings and Practice: High Teacher Input and Low Student Input

At the beginning of the year, Ann described her approach to lesson planning as "spontaneous" (Interview, 11/12/03). She reported that she liked to develop general ideas for activities, then rely upon the occurrence of more specific ideas as she would "read the class and take their cues" (Interview 11/12/03) once the lesson was underway. "I'm very impulsive! And then you hate to squelch any creativity by planning too much," she said (Interview, 11/12/04).

For her first observed lesson, Ann planned for her mathematics class to brainstorm ideas for different ways to make a study guide in preparation for an upcoming chapter test, then choose a way to make his or her study guide. During the brainstorming session, students struggled to think of ideas for ways to make a study guide.

> Ann: "Who can think of some ways of putting all this information so you can go home and study? Think! Think! Think!"
> Several students raise their hands. Ann calls on one who says they can write the information.
> Ann: "Okay, so somehow you're thinking of a list. We have a list here on the board." (referring to one she made as she reviewed the content of the unit previously). "Would this help?"
> Students: "No."
> Ann: "We just listed the things. What would you need to do . . . (child says they need more information). "So you might want to have a list with some drawings, maybe and maybe some explanation? . . . I would call that a poster."
> . . . . A child suggests that they could put the information in order.

> Ann: "How could you put it in order? You know what? I've got something better." [At this point Ann showed the class a set of index cards and described how they might be used to make a study guide.] (Field notes, 10/8/03)

"I think they had no idea what to do," she later reflected (Interview, 10/8/03). Ann found that she needed to give the children three options she generated herself. Once the children had chosen one of the three ways to make a study guide they needed step-by-step direction from Ann and her two assistant teachers to complete the activities (Field notes, 10/8/03).

"My first impression was tons of work," Ann said later when she reflected on this lesson. "I can't imagine doing it with 18 kids by myself. . . . I think in the beginning you have to teach them certain things" (Interview, 10/8/03). Ann found herself taking a highly directive role that maximized her input and minimized students' input. Nevertheless, she found that this lesson did provide another step toward increased student input into classroom activities. Students made a decision about which of three ways they would make a study guide and they participated in reflecting on whether their study guides helped them prepare for the test. They indicated pride in the outcomes of their chosen work and most did well on the test (E-mail communication from Ann, 10/15/03).

Academic Choice as Peripheral to Curriculum

When I first asked Ann to explain her understanding of academic choice she responded:

> I think of academic choice as a tool for assessment and it allows the child to show me what they have learned [sic]. So if I want them to demonstrate to me that they understand the concept of the difference between rocks and minerals I would then give them an opportunity to show me that. And they could do it artistically, musically, through plays or scripts, through any means that they have as long as I had set up some guidelines. (Interview, 8/21/03)

The emphasis here is upon a choice among various media for expression of knowledge. Ann taught lessons using content and activities selected by her, by her curriculum guide, or a combination and students had little, if any, choice about what or how they would learn.

In the initial interview Ann indicated that she considered true academic choice opportunities to occur after learning had taken place. The same learning would take place whether academic choice was provided at the end of the unit or not; it was simply a particularly engaging way for students to culminate a unit of study, a sort of summary, or review of material covered. The value of academic choice lay in its ability to provide students with engaging options for expressing knowledge, thereby

improving their chances of success and a good grade. Academic choice was, in effect, something that could be added to the end of a unit of study. If time was short it could be dropped with no important repercussions. Therefore it was peripheral – something to enrich the regular curriculum, not an integral aspect of it.

Ann began to experiment with using choices as a way for students to learn with her first observed lesson. With the task of choosing how to create study guides she shifted from using it as an assessment tool to using it as a way for children to prepare for assessment. "I thought it was more a learning goal," she told me. "It adds another dimension to what I thought I could do" (Interview, 10/8/03). She remained dubious, however, about the possibility of children learning new information with choices. "I still think that if you had to teach it to learn something brand new and you have a choice about it – well, what's your choice? . . . It takes a lot more and I still think you need to say with that choice, this is what you need to find out. . .(Interview, 10/8/03). Choice provision remained peripheral – a way to reinforce learning rather than generate learning.

Emphasizing Products Versus Processes: A Focus on Products

If choices in school mean choices about how to demonstrate what students have learned, then they are choices about how to create products – concrete demonstrations of knowledge. Ann viewed the role of student choice as one of choices of media with which to represent teacher provided knowledge.

This conception of the role of academic choices influenced the way she planned for them. She described her planning process for choice provision as follows: "I always start backwards with what do I want the final project to look like? How many things do I think they need to show me that they have learned?" (Interview, 8/21/03). The variety allowed by choices enabled her to offer options for the creation of academic products that increased the likelihood that students could convey their knowledge in ways that worked best for them.

When I asked if this was the only way she would use academic choice, Ann indicated that she thought it was also supposed to provide a means through which children could actually have choices related to learning new information and skills, but she was unclear how this could be possible.

> Well, I could [use it as a way for children to learn], but there're always some guidelines from me. I mean when I give children some new concept, like with the computer and there's a page that I want them to go to. . . . there is some knowledge that I want them to get from that page or website, but it's already determined from me what I want them to get. So, where would their choice be? (Interview, 8/21/03)

Ann had a difficult time imagining how she might plan for choices involving the processes of learning. The idea of students having input into how or what they learned was not nearly as comfortable to her as that of having choices of how to practice or demonstrate knowledge taught through the usual methods. How could they have choices in the process of learning and still learn what was required?

During the fall, Ann's focus for her planning and implementation of academic choice remained primarily on the products students would create in the form of study guides, riddles, posters, poems, demonstrations and presentations, or homework papers (Field notes, 10/8/03;11/3/03; 11/6/03; 11/17/03; 12/9/03). "I need a grade," she told me (Interview, 2/4/03). Academic choices offered her ways to increase students' motivation and quality of performance on academic products, which in turn, she hoped, would help them receive better grades and hopefully learn more.

After her initial experiment with the creation of study guides for a mathematics test, Ann employed academic choices concerning the creation of products as important aspects of the first science unit of the fall (11/3/04). Students were given a choice of ways to demonstrate understanding of their choice of three of seven important concepts related to earth science within the topic of "Change". Her expectations that this would improve the quality of students' work were not met.

In an attempt to understand what had gone wrong, she began to examine the processes that had led to disappointing products. "I analyze all the stuff. Why they didn't do it well, you know?" (Interview, 11/5/03). In reflecting on her implementation, Ann realized that though she had told students to create a "blueprint" of their projects to discuss with her before beginning work on the actual projects, most students had failed to do so. She had allowed them to skip this step and focus on their final products without much planning or input from her along the way. Students lept to complete products without engaging in processes of thinking and planning that were required to allow high quality final projects.

Nurturing Student Dependence Versus Independence: Dependent Students

Asked about the role of academic choice in individualizing instruction in August, Ann responded, "Well, I don't know if it's instructing. I think instructing is teaching" (Interview, 8/21/03). She could not see that academic choice might have a role in individualized instruction because she did not see a role for student input into instruction in the first place. "It's already determined from me what I want them to get," she told me in the same interview. She believed that students must necessarily be dependent on teachers' direction in order to learn what was required by the school district and found it difficult to imagine how students might have productive choices about instructional processes. It was her job to direct learning, not the students' job.

During the first two rounds of observations of Ann's implementation of academic choice lessons the students were more dependent upon teachers' supervision and encouragement than independent. Almost all classroom interactions occurred between teachers and students and Ann's roles were primarily directive. During the first session consisting of choices about how to create a study guide Ann remained seated with one group of students and gave directions for each step of the activity (Field notes, 10/8/03). For the second observed lesson, Ann offered choices among three ways of demonstrating knowledge of key concepts taught in a science unit to complete as homework (11/3/03). Approximately two-thirds of the students did not complete the projects independently. Ann spent a great deal of time planning and implementing strategies that would give the students support to finish their task (Field notes, 10/30/03; 11/6/03; 11/10/03; Interviews, 11/5/03; 11/24/03). Her primary roles were those of instructor and manager. As manager, Ann set deadlines and established strategies for helping students complete work such as supervising work on projects during recess.

Transitions in Understandings and Practices Regarding Academic Choices

Increasing Proactive Teacher Input to Increase Student Input

In an attempt to increase student input into their academic choice activities after the experiment with the study guides, Ann and I planned the second observed lesson with a focus on careful proactive thinking (Planning interview, 10/29/03). Together, we went through a step-by-step planning process beginning by clarifying the goal of the lesson (to demonstrate knowledge of key

science concepts associated with an introduction to Earth Science) and identifying choices based upon activities for which students had had prior instruction (Write an essay, make a poster, or write an acrostic poem). We thought about what could go wrong and set up structures to minimize these potential problems. Ann generated a list of criteria for good work that would guide students as they planned, worked, and reflected, and guide her implementation and evaluation of students' work as well. She noted that this lesson would take place with her homeroom group, which she expected to be more able to work with independence than she did her mathematics group, which had more academic issues.

Teacher input into the lesson remained high, but its nature changed. Rather than directly providing information and step-by-step direction throughout implementation, students could use the teacher-developed structures to increase their own input during the lesson. Within clear frameworks students were able to make independent decisions not only about which three concepts they would demonstrate, but also about how they would do so and what information they would include. Though most did not complete the projects with independence, all the students were able to develop more of their own ideas about how to fulfill the assignment than they were for the study guides (Field notes, 11/6/03; 11/10/03). The variety among student products increased, reflecting more of their unique voices, understandings, and styles.

For the choice lessons in mathematics and reading that followed, the amount of teacher structure also increased and the types of choices available to students were quite a bit narrower than they were in the first observed lesson. For example, in order to apply their knowledge of place value, students created riddles for large numbers (Planning Interview, 11/5/03). Within this activity they selected the numbers for which they would create riddles and the types of clues they would use. From a very open-ended choice of ways to make study guides, Ann planned narrower choices of numbers for which to create the riddles and the kind of information included in the riddles. In reading, students made choices such as whether to publish poems using a computer program or by writing and illustrating them by hand, or among four possible ways to respond to daily reading in journals (E-mail communication, 10/13/03). Ann only offered options for which students had received prior instruction.

Within the structure of narrow choices, they had more input than they had when the choice began as a broad one as it had with the study guides.

In science and social studies lessons, choices tended to become broader over time. It was in these subject areas that Ann experimented with various degrees and types of teacher input resulting in different degrees of student input into the lessons. The fourth observed lesson, Ann's second choice lesson for science, occurred in response to dissatisfaction with students' performance on a unit test. Returning to a more spontaneous mode of planning, Ann informed me that she had come up with an idea for increasing students' grasp of key science concepts through choice provision (Interview, 11/12/03). She would have each student choose one of the six key concepts, then work with the other students who had chosen the same concept to develop a way to teach that concept to the class. How they would do so was entirely open-ended. Students would be responsible for generating and recording their plans for teaching the concept before proceeding.

Students engaged in this lesson with great enthusiasm and creativity. They constructed models, planned demonstrations, and developed quizzes. Ann's direction was minimal and student input high until time for them to present their lessons to the class (Field notes, 11/17/03). Several of the groups provided inadequate or inaccurate information and Ann stepped in to direct the presentations and intervene with some instruction of her own (Field notes, 11/18/03; 11/19/03). At this point student input decreased and teacher input increased. Later, Ann reflected, "I don't know if it really helped. . . . I think I really should have given them more direction on how to really get information so that they could become experts" (Inteview, 11/24/03).

For the next science unit the choices narrowed to selection of which 4 of 12 minerals they would study and student work was highly teacher structured as Ann followed the curriculum guide closely. Students learned about and conducted tests on the minerals, and then recorded results. Teacher input into the nature of students' activities was much higher, student input lower (Interview, 11/24/03; Field notes, 12/9/03; 12/10/03; 12/11/03).

This negotiation of the balance between teacher and student input into lessons incorporating student choice continued throughout the year. Ann sought ways to increase student input without

sacrificing the quality of their products or the amount and accuracy of what they learned. Asked in a mid-year interview (2/4/03) how she had changed her approach to planning she said, "Well, the whole idea of you need to give them ideas of what choice is. I think that's real important. . . . Lay the groundwork, lots of groundwork, and then they can do it." In conjunction with this insight came the understanding that in order for students to have greater input into their learning, she, as teacher, needed to put more time and energy into planning academic choices. "I think it's a lot of work for it to work well," she noted in the same interview.

Academic Choice as Peripheral Versus Integral to Curricula: Student Choice as an Integral Part of Instruction and Learning

By November Ann was using student choice with a goal of promoting increased understanding of key science concepts, such as erosion and the rock cycle, rather than simply for demonstration of learning that occurred through more traditional methods. The choice of ways to teach a science concept to the class was intended to motivate students to review information and think carefully so that they could develop the understanding necessary to teach others (Interview, 11/12/04).

From December on, academic choice became an increasingly central part of Ann's science and social studies curricula. Choices of which 4 of 12 minerals to test and study (Field notes, 12/9/03; 12/10/03; 12/11/03) were much narrower than the previous, highly open-ended choices of ways to teach a science concept, but they were also more central to the process of learning. The choice of minerals directly affected activities essential to meeting the learning goals for the unit. It was Ann's first foray into allowing her students to have input into some aspect of the content they learned.

In January, Ann designed a social studies unit on the geography of the Mid-Atlantic States so that student choices were very broad and also central to her instruction (Interview 2/4/03). Students could choose not only what information they learned about the region, but also what sources they used from which to learn. Available sources included the textbook, library books, and Internet websites. From not being able to imagine a way to give students choices about what they learned Ann had shifted dramatically. Choices were integral to both learning processes and outcomes. There was a

caveat, however. Ann told the children that they would be tested only on the information that was in the book. She explained her reasoning:

> Because I have to ask questions about Delaware and look at all the thousands of questions about Delaware. . . . I have to have a primary source that we're going to use. And so I said, you can work by yourself or with a partner and you're going to have an end project and you can do whatever you want. . . . But I have to have a form of assessment, so I'm going to use the book as my assessment piece. (Interview, 2/4/03)

Ann's ambivalence about allowing students choices that had such an impact on what they learned created a gap between the learning goals for the unit and the choices that children made. They could learn whatever they wanted, but they would be tested only on what was in the book.

Emphasizing Products Versus Processes: Beginning To Provide Choices Regarding Learning Processes

With the science unit on Rocks and Minerals, Ann began to provide narrow academic choices related to the processes of learning in addition to choices about the products of learning. Choosing to learn about a few minerals rather than all twelve allowed the children to focus on the processes of learning about them. "The point is learning characteristics and properties and the process that scientists go though to determine a rock from a mineral and one mineral from another," Ann explained (Interview, 11/24/03). This time, with my encouragement, she began with the learning goal for the unit, and then determined how she could use choice to help students meet this goal rather than restricting choices to ways to create products after instruction was completed.

Ann returned to open-ended choices of ways for students to demonstrate what they had learned upon completion of instructional activities for this unit, switching the focus of students' choices from those related to the processes of learning to those related to the products of learning. From narrow choices regarding processes, students returned to broad choices regarding products (Interview, 2/4/04). Choices relating to processes of learning were separate from those related to products.

For the next observed instructional unit on the Mid-Atlantic States of the United States, open-ended choices of processes and content for learning were integrated with open-ended choices about products that would show that learning. Children worked on their projects (maps, booklets, charts, and

posters) as they collected information (Field notes, 2/9/04; 2/12/04; 2/23/04). Much of their choice of content for the final products did not incorporate content relevant to Ann's stated learning goal, of knowing the information in the textbook (Photo archives of student work, Observed Lesson Six, 2/25/03). Choices about learning did not lead to the inclusion of the type of content in the academic products for which Ann hoped. Noting that the content of the final projects was limited to a collection of isolated facts about each state, she said:

> This is a jeopardy kind of thing. I mean who can remember the most in facts is not important. There are some concepts they need to come away with – that the climate changes a little bit, that the type of produce is related to the kind of farming you have, which is related to the climate. I'm not sure they are getting those big concepts yet. . . . I haven't done anything with them. I really left them alone and I'm not sure they are ready to do that. . . . They went automatically to what they liked best, which was that little map in the back [of the textbook]. . . . I think they had a ball doing it. But is that good enough? (Interview, 2/25/04)

Nurturing Student Dependence Versus Independence: Increasing Independence

As Ann began to lay the groundwork for necessary prior knowledge and provide more structure for choice activities students' independence began to increase. During the third observed lesson she worked as a coach of student performance almost as much as she worked as an instructor and manager. Students worked individually on tasks and brought their questions and completed work to Ann for advice and approval. In addition to providing instruction when children seemed to need it, Ann provided coaching support such as "This is looking great! You just need one more clue and don't forget to make your neat copy" (Field notes, 11/6/03).

This moderate shift in the teacher's roles correlated with a moderate increase in peer interactions about tasks. Most interactions consisted of one student helping another or offering advice. For example, I observed one girl, who had completed her riddle. She watched the work of her neighbor for a moment before saying to her, "Your number goes up to ten thousands place?" The girl responded, "No." "Yes, it does," the neighbor replied. "[In your clue] you said it had five digits" (Field notes, 11/6/03). During this observation most students were able to complete the tasks without step-by-step direction. Many initiated interactions with Ann rather than depending on her to direct their behavior during the work time.

During the fourth observed lesson in November (Field notes, 11/17/03), when small groups of students planned and presented projects designed to teach information to classmates, student interactions about their work during choice activities were high. They remained high for most of the lessons I observed for the remainder of the year. Ann frequently moved about the room from group to group as they worked. The roles of coach and manager began to be more common for Ann than that of instructor. As coach she gave advice such as, "You need to get up in front [of the display] so people can see. Get your notes" (Field notes, 11/19/03). The focus of her interactions shifted from providing information to establishing procedures and resources so that the children could either obtain information and conduct demonstrations themselves or they could rely upon their prior knowledge to complete the activities.

Beginning with this lesson I also observed occasions in which Ann acted as a facilitator, thereby encouraging students to draw upon their own resources to be independent learners. For example, after a student group had completed their presentation on the formation of sedimentary rocks, Ann asked students for any questions or comments they might have for the presenters:

> Student: Could [sedimentary rock formation] happen without water?
> Ann: Good question!
> Presenter: Probably, because if something dies the bones might sink . . . . it might die on top of the sand and get buried. . . .
> Ann: Raise your hand if you think you need water for sedimentary rocks to form. (about half raise their hands.) So . . . some think the water is necessary and some think it isn't necessary. So we can look at those things a little further. (Field notes, 11/18/03)

Rather than feeling it necessary to provide all the answers to students' questions and all the corrections to their misconceptions, Ann began to encourage them to think and find answers for themselves at times.

Understandings and Practice of Academic Choice at the End of the Year

Seeking an Optimal Balance Between Teacher and Student Input

Over the year, Ann grew increasingly comfortable with allowing students to have greater input into more aspects of their curriculum. She no longer felt the need to dictate all aspects of what and how the children learned. She found that by changing her emphasis to a focus on the proactive development of structures to meet learning goals, she could comfortably allow students to have more

input into aspects of their learning. In our final discussion of this study in June, Ann spoke about her current understanding of academic choice provision:

> I think I always thought of it as one way and now it's become many things. . . . I guess I would define academic choice as a way of enabling a child to learn and to show what he has learned or what she has learned in their own style. So they can learn that way or they can show what they have learned in a style that's best for them. (Interview, 6/9/04)

From a limited role in assessment of entirely teacher directed instruction, student choice now had a vital role as a way to incorporate student input into instruction as well. Ann's use of academic choice provision was more varied and flexible. She could draw upon a larger repertoire of ways to provide choices to respond to different types of learning goals and different types of students.

Ann was comfortable with the use of narrower types of choices, and she especially relied upon these types in planning choices for her less academically able mathematics and language arts classes (Field notes, 11/6/03; 3/25/04; 4/1/04; Interview, 3/24/04; 4/8/04). These types of choices allowed students with fewer prior skills and less mastery of content to have some input into their lessons without sacrificing the amount of direct instruction that Ann felt they also needed. Asked if she thought such narrow choices made a difference to students, she responded, "Does it matter? . . . These kids . . . who struggle in school . . . I see that they like being in charge and they like being empowered. So anything that gives that to them – you can see them. Their body [language] is even different" (Interview, 4/8/04).

By the end of the year, students had regular choices in mathematics and reading. They regularly chose how many computation problems they would complete for independent practice, for example. They chose how to practice multiplying three-digit numbers and they chose beads and designed their own bracelets before calculating the total cost of the beads they had selected based on their individual values. Every week students chose a way to practice their spelling words and a way to write in their reading response journals (Interview, 3/24/04; 4/8/04).

It was the broader types of choices that she employed in Science and especially Social Studies instruction that Ann felt were most valuable, however. These types of choices called for the greatest amount of student input because they allowed input into both learning processes and products. Ann

noted that broad choices only worked well when the learning goals for a lesson or unit of study were broad as well.

> Broader things allow for broader thinking, which allows for more interpretation, which allows for more avenues for them to go down. So if I'm studying a state, that's pretty broad, which allows them to be broad in what they learn. Whereas if I'm learning how to multiply, well, there are only so many ways I can do that. Then I use academic choices more in how they practice and showing me what they've learned. (Interview, 6/9/04)

An expansion of Ann's reasons for valuing academic choices at the end of the school year corresponded to the expansion of its role in her teaching. In early fall she had stated that choice provision empowered students because it let them do what they wanted to do so they could succeed and feel good about themselves (Interview, 8/21/04). In June she still believed that its abilty to empower students was the primary value of choice provision, but her characterization of the nature of empowerment had broadened to include notions of students as more active initiators and contributors to their learning activities. In addition to fostering success and self-esteem, choices empowered by encouraging children to "feel confidence in themselves to try things." She noted that children not only felt good about themselves when empowered, they also felt more personal responsibility and more intrinsic motivation to take risks and to learn. Speaking of what motivates children to be responsible for learning, she said, "I think it's got to come from their heart and soul. It's got to be part of them" (Interview, 6/9/04).

Academic Choices as Integral: Using Structures for Choice Provision as a Way to Design Curriculum

By May, Ann expressed confidence and reliance on academic choice provision as a teaching strategy. "I try to think of it more often when I try to design something," she reported (Interview, 5/26/04). From incorporating choice into lessons provided by teacher's manuals mid-year, she had shifted to using it as the central structure for independently designed curriculum for a social studies unit on the Southeastern region of the United States.

> You've got to know where you want to go because before you give choices you have to know what you want them to learn. . . I have to keep going further into out of all there is to know, what will help them get more concrete ideas? So you keep on going further and further instead of just opening the book and saying, 'Okay, we're doing the Southeast Region, page 1.' You have to go to the end and go backward, so ultimately what's important for them to

> know? And what will get them there? I think that's what's great for a teacher. (Interview, 4/7/04)

Ann used the state Curriculum Frameworks (Massachusetts Department of Education, 2003) to glean what she deemed to be the most important ideas and information for this unit, and then established her goals for the children. With that clarity, she was able to establish a clear and broad set of choices for the children within the framework of the specific concepts they needed to learn. Facts about the states could come from any source as long as students applied the facts to broader concepts such as the effect of climate and waterways on economies. She did not need to rely solely on the textbook, and neither did her students. Ann developed a clear set of requirements and choices and posted them in the classroom. She also prepared handouts so that each student had his or her own copy of the guidelines for study (see Appendix K).

Because she had established the learning goals for the unit and thought carefully about how the children's requirements and choices would help them reach those goals, she did not feel a need to give them a test on the chapter as she had in the past (Interview 5/26/04). She was confident that she could tell whether they had learned by observing and interacting with them about their work. From using academic choices only to assess learning aquired by following external curricula sequences, Ann had moved to incorporating assessment as an organic part of using academic choices to design learning experiences.

Products Versus Processes: Addressing the Inter-Relationship of Processes and Products Through Choices

In the social studies unit on the Southeastern Region of the United States, choices in the processes of learning were directly related to the products of learning and both were related to learning goals that were specifically defined. Because she identified her goals for student learning first, then planned the activities by which students would reach the goals, students' choices within the activities were more likely to direct them toward learning key information and concepts. Ann knew that she wanted the children to gain some understanding of relationships between geographic aspects of the regions and their economies. She wanted students to have some understanding of the relationship of

the region's history to its geography and economy. She also wanted students to hone their skills in locating resources and reading for information and to increase their interest in and enjoyment of United States geography (Interview 5/10/04).

With these goals in mind, Ann designed an instructional unit with student choice at its heart, but teacher guidance as its framework. To meet goals of increasing skills in information gathering and enjoyment of learning about U.S. geography, she offered broad choices of resources and kinds of information to gather. The text was one option, but not required. Students could find their information in any of a number of resources made available to them. They could read and record any facts that interested them. To meet goals of conceptual understanding, Ann offered choices that narrowed the limits within which students worked. Each student researched information on only one state. She developed three questions concerning the conceptual relationships she wanted students to learn and told students to choose any two of the three questions to answer as a part of their research (Interview, 5/10/04). Because the content was narrower, students could spend more time on the processes of learning.

Choices relating to academic products were also narrower than those for the prior social studies unit on the Mid-Atlantic States (See Appendix K). All students used the information they learned to add information and illustrations of their choosing to a large outline map posted on a bulletin board and to write an essay about their state. Less open-ended choices for academic products allowed students to put more thought and energy into their research and finding answers to their selected questions than into creating final projects. The focus of student choice-making was more evenly balanced between products and processes.

Nurturing Student Dependence Versus Independence: Highly Independent Students

By May, when students were implementing many choices in their study of the Southeastern region of the United States I rarely saw Ann act as an instructor, and her most frequent role while students were working was that of observer. Students collaborated to find information and work on the products they had chosen to create with a high degree of independence (Field notes, 5/10/04). Ann noted that the quality of their work had improved as well. They were now creating products that were

neat and thorough with no direct instruction and little coaching and supervison from her (Interview, 5/26/04). She divided her time between moving about among the students as they worked and offering advice, encouragement and facilitation of their thinking and remaining in one place as she observed them (Field notes, 5/10/04). The implications of a lack of movement about the room by Ann had changed. Whereas remaining in one place in the fall generally indicated a high degree of teacher direction of students, in May remaining in one place meant that Ann was sitting back and watching her students direct themselves.

Student Outcomes

Student outcomes included: (a) positive student engagement in choice activities, (b) improvements in the quality of academic products produced during lessons involving academic choices, (c) some tendency for more positive student interactions, and (d) mixed outcomes for the effects on student learning. Positive engagement occurred consistently when academic choices were provided regardless of the type of choice. Improvements in the quality of products and of student interactions were primarily noted during broader types of choices. Ann felt that learning outcomes improved as a result of most of the narrower types of choices provided, but she expressed doubts about the learning outcomes of the broader types of choices.

Student Engagement

The category of student engagement consists of three sub-categories: (a) enjoyment of activities as gauged by student affect and language during the observed lessons, (b) on task behavior, or devoting time and attention to the procedures and products of the lessons, and (c) initiative, or acting on an independently generated idea. These three categories represented the most consistent positive student outcomes of academic choice provision. Ann repeatedly reported satisfaction with her students' level of engagement during choice and this was her primary motivation to continue to develop her own use of it.

Enjoyment

Often, Ann's first words during reflection sessions referred to the children's enjoyment of the observed lesson. "I felt that the children were totally into the activity," she reported at the conclusion

of the first observed lesson in which students chose how to create study guides (E-mail communication, 10/13/03). After introducing the choice science projects for observed lesson four Ann told me, "They're all excited. They can't wait. They're shiny, you know?" (Interview, 11/12/04). Later, when she was discussing the sixth observed lesson on the Mid-Atlantic States, she said:

> They were very happy. This morning I said, 'You have a few minutes to work this morning because today is our last day. And they busily got their stuff out and used that ten minutes before morning meeting to get some work done on their projects. A lot of them took work home tonight. They seem interested in it. I don't think anyone is not doing anything. (Interview, 2/25/04)

Ann reported that, at one point, the children happily agreed to cut recess short so they would have more time to work on their choice science projects (Interview, 3/9/04). In the same interview, she told me, "One of the reading teachers came up to me and said, 'Oh my God! What science experiment did you do? In reading, she [the student] wrote all about it and used similes about the substance. She said it was fabulous!'"

My observations and student interviews corroborated Ann's reports. Children consistently reported that they enjoyed having choices, "because it's more interesting and more fun," as one girl told me (Student interview, 12/11/03). During every observed lesson students attended closely to Ann's introduction of background knowledge and the choices that would be available to students. Frequent exclamations of excitement were heard as Ann introduced the choices throughout the year. Transitions from initial group meetings to the choices activities themselves were made quickly and students began working productively on their choice activities immediately in all the observed lessons. I regularly overheard students express delight to Ann with comments such as, "Mrs. __, this was fun!" (Field notes, 12/10/03).

On Task Behavior

Both my periodic scans of the classroom in general and my closer observations of individuals and small groups at work indicated that students were highly focused on the tasks at hand and enjoying the process. For example, during a scan of the classroom while observing a choice session for social studies I recorded the following:

> Two students are up getting library books from the table in the corner. Two boys count together how many facts they have written, then discuss which facts they think are the

most interesting. T. sits alone and writes in his notebook, the text beside him. It appears that every student is either reading, writing, retrieving resources, or talking about the work at hand with someone.

B. has a long list of facts and is adding more as she finds them on a website. She is working off a laptop at her desk. K. looks through a book that he told me he checked out of the library today. At the same table, C. sings "I love New York", his textbook open to a section on New York State. He stops singing and asks a tablemate how many facts he has on New York. "Before I add these new facts, I have 53," C. then tells him.
At another table, M. tells K. that he wants to get seven more facts about New Jersey before moving on to another state. K. then reads aloud to M. from a section on New Jersey in the textbook as M. writes what he hears. (Field notes, 2/10/04)

Ann also noted that academic choices seemed to be associated with a great degree of task focus on the part of her students. Reporting on a meeting in which students shared the results of choice work with each other she said, "They're all sitting there with their clipboards and their index cards and they're taking notes on what everyone is saying. They're into it!" (Interview 5/26/04)

Even very simple choices increased students' task focus. Discussing her mathematics class Ann said:

> [In math] I'll give them a page. They ask how many problems they have to do. I'll say, 'Well, let's see how far you can get. Work hard. Work your hardest, do your best, your personal best and show me how much you can do. And they get the whole page done. Whereas, if I say, 'Do the whole page, they don't finish. (Interview, 3/24/04)

Initiative

High levels of student initiative represented a striking outcome of those lessons that incorporated broad choices. It was less striking with the more narrow types of choices, but still in evidence. I observed students generating and following through on their own ideas. In the first observed lesson, for example, students made independent plans to continue to work on their study guides after school (Field notes, 10/8/03). Two girls planned to get together as they gathered materials to take home with them. I saw students ask permission to work on their choice projects at other times during the day, or to take them home (Field notes, 11/17/04; 2/12/04).

Ann also reported that many of the children exhibited higher levels of initiative during choice times. One science lesson involved generating questions about a "mystery substance made of cornstarch, water and food coloring" (Field notes, 2/26/04). Students chose three of the questions to guide their exploration of the substance. After this lesson, Ann reported that many of the children

asked if they could take some of the substance home to explore it further. They continued to generate and explore the answers to questions about the substance on their own time. She said:

> And then, the next day, some of them brought it back in – in squares. And they were bouncing it. They were putting color, they were putting marker to it. They were seeing that it absorbed the color of the marker. They were saying, 'Watch it spread!' . . . They decided after all our discussion that it was a solid. (Interview, 3/9/04)

Improvement in the Quality of Academic Products

The quality of student products was not an issue for lessons that involved narrow types of choices, because the children's choices did not provide them a great deal of input as to the nature of the product. For example, after students chose what kind of study guide to make in the first observed lesson, teachers directed the production of the guides (Field notes, 10/8/04). In the third observed lesson for mathematics, choices of which numbers to use and the precise nature of clues did not have a great impact on the quality of the completed riddles (Field notes, 11/6/03). All students made a neat copy of one riddle on an index card after receiving teacher approval. Narrow choices concerning processes such as where to place ice before timing how long it took to melt did not seem to make a noticeable difference in final academic products such as written summaries of what happened, according to Ann's perceptions (Interview, 3/9/04).

In contrast, when choices were broad, the quality of students' academic products figured prominently in Ann's reflection on the success of choice provision. She was disappointed with the quality of student products earlier in the fall (Interview, 11/5/04) but she reported steady improvements in this area as students experienced more choice activities (Interview, 2/4/04; 2/25/04; 3/26/04).

After the first science projects in which students created a poster, a poem, or a written report to demonstrate their knowledge of three science concepts, Ann and I looked at some of the completed work. Holding up a poster, Ann said, "I don't know what they're trying to tell me about a fossil! Would I be able to learn from this? It's not neat! I'm not sure what this is about" (Interview, 11/5/04) She noted that students did not include titles or captions where needed and that many projects appeared to have been completed quickly with a minimum of care. Only about a third were turned in by the date they were due.

By mid-year, when students were working on choice projects to demonstrate what they had learned about minerals Ann was much more positive. "The projects were neater," she told me. "More of them were done on time. The information was good" (Interview, 2/4/04). She also reported that many students had put extra work into the projects to make them more "decorative" and attractive. During the following observed lesson in which students made broad choices about creating projects to demonstrate knowledge of the Mid-Atlantic States, product quality further improved. "They are getting into [the idea] it must be attractive. They are asking, 'Can I borrow your glitter?' They are trying to be a little bit more creative" (Interview, 2/25/04).

During the final observed lesson in which students made broad choices in learning and demonstrating learning about the Southeastern States Ann was able to sit back and enjoy the investment and expertise with which products were independently completed (Field notes, 5/10/04). Referring to a large bulletin board upon which students added illustrations, maps, and written information about the states, she said, "I loved watching them go to that board. No one was touching anyone else's state! They had total ownership of it. They would put something up and take it down because they didn't like the way it looked" (Interview, 5/26/04).

Positive Student Interactions

As students became increasingly independent during choice activities their opportunities for self-initiated interactions with each other increased. Whenever the children interacted with peers there were both positive and negative types of interactions, but there were times, when the choices were broad in nature, that Ann noted some positive student interactions that she perceived to represent distinct shifts from the normal range.

First, she noted that highly capable students were spontaneously and respectfully helping those who were less able. She remarked on such interactions during three of the five observed lessons incorporating broad choices. On one occasion she told me about a bright and popular boy, "A," who invited an unpopular boy, who struggled with schoolwork, "L", to work together with him and his partner. When I observed this group, L, who had been unfocused and complaining in the previous observation, was sitting with A and hard at work (Field notes, 2/9/04; 2/12/04).

Another boy, "S", diagnosed with attention deficit hyperactivity disorder and retained for a second year in fourth grade, told me in an interview that he liked having choices in science lessons because "I meet different people – smarter kids" (Student interview, 12/11/03). With regard to the same lesson that S was discussing when he made that observation, Ann shared, "It was interesting because S made a comment that was all wrong. And M [a highly capable student] sat there and was talking to him and explaining what weathering really was. It was lovely" (Interview, 11/24/04).

Another aspect of student interactions that Ann particularly noted was an increased amount of spontaneous sharing of creative ideas for projects when choices were broad in nature. Speaking of the improved quality of the work produced to demonstrate knowledge of the Mid-Atlantic States, she said:

> I think they piggybacked off each other. They saw, "Oh, this one is using glitter. I'm going to do that. This one is putting yarn on it. I'm going to do that. They are doing a map. I'll do that." . . . No one was angry over "they are taking my idea." (Interview, 2/25/03)

Effects of Academic Choices on Student Learning

Ann's perceptions regarding the effect of academic choices on student learning were mixed. For lessons involving narrow choices she was generally satisified that the children learned as much and perhaps more than they would without choices. When the choices were broader, however, she frequently raised questions and concerns about the effect of choices on the quality of students' learning.

When reflecting on the outcomes of narrower types of choices such as the creation of different study guides, or ways to practice multiplication, Ann frequently remarked upon the usefulness of choices in nurturing, reinforcing and extending student learning (Interview, 10/8/04; 3/30/04). She and her students were delighted with their performance on a mathematics test after completing and using the study guides (E-mail communication, 10/13/04). She also noted that having choices about creating riddles that required application of knowledge of place value provided great reinforcement for students (Interview, 11/12/03). Ann was excited about the quality of the experimentation and thinking engendered by choices regarding science experiments in the seventh observed lesson (Interview, 3/9/04). Finally, as a result of choice activities for practicing multiplication in the eighth observed lesson Ann reported that students who had the most trouble learning mathematics were successful and

some even went beyond the learning goals of the lesson. "I had three of them multiplying three digits by three digits," she said. "And Sam could do it. He said, 'I'm going to go home and show my mom. Can I do this for recess?'" (Interview, 3/30/04)

Though Ann said she most enjoyed and valued academic choices when they were broader than the types described above, she was less convinced that lessons incorporating such broad choices had a positive impact on learning (Interview, 6/9/04). The first set of broad choices was offered for the second observed lesson when students chose ways to demonstrate knowledge of earth science concepts for homework. In addition to her concerns about the care and quality of presentation in the projects, Ann was discouraged with the content of many of them. Much of it was either loosely related or not related at all to the content of her earlier instruction:

> Some of them were just awful! The projects were awful and they evaluated themselves as okay! I mean some kids did it on dinosaurs. We talked about one little bit of dinosaurs when we did fossils . . . and they wrote the whole thing about dinosaurs! And then one girl did anything on science. She did atoms! (Interview, 11/24/03)

When Ann gave students a test on the content of the textbook chapter on the Mid-Atlantic States toward the end of that unit she said, "They really didn't do well," and went on to explain important ideas from the text that the children did not seem to have learned as they decided what information to record and present in their choice projects. Asked whether she thought designing the unit with academic choice as a central structure was the cause of the poor test results, she responded, "I don't know! . . . I'm letting them be their own teachers, so is it going to be the same as someone who's really teaching them?" (Interview, 2/25/04)

For her final social studies unit on the Southeastern States, Ann carefully balanced students' choices about what content to learn with requirements that assured that they would also address content that she considered important. She was pleased with students' work, in general, but nevertheless expressed doubts as to whether the use of choices led to as much overall learning as more traditional methods of instruction.

> I truly still don't know if they've learned as much as if I had done it. . . . [If I had] really directed and catitalized on the important things and made sure they paid attention to this and that. . . . I may be hung up on did they learn content more, which is maybe not as valuable as the process they went through. . . . I don't know if they have a sense of the whole region. . . .

> But today I was hearing comments like "Oh, my state is like that too," . . . so maybe they're making the connection. (Interview, 5/26/04)

Despite her concerns that broad academic choices did not lead to the same amount of learning as more traditional and directive forms of instruction, Ann also found evidence that use of academic choices might not only lead to as much learning, they might actually increase it. Ann taught all of her social studies units with academic choice as the central method after the first unit. Ann's class was the only one of the fourth grade classes in her school to use academic choice for social studies. This took more time and they did not cover as much of the content for the year's curriculum as did the other classes. In her final interview Ann reported that all the fourth grade classes in the school had just completed a citywide test in social studies. Her class had the highest average score on the test (Interview, 6/9/04).

Summary of Results

Important contextual factors that affected Ann's development of her use of academic choices in her curriculum were (a) time, (b) high stakes testing, (c) required curricula, (d) students' prior knowledge, and (e) teacher support. Over the course of one school year Ann's understandings and implementation shifted from an emphasis on teacher input to a greater balance between teacher and student input into the curriculum. The role of academic choices shifted from a peripheral to an integral role in the curriculum. From a primary focus on academic products alone, Ann's focus changed to a focus on processes and products as inter-related. Students became increasingly independent. Perceived student outcomes included increased engagement in academic activities, improved academic products, a tendency toward more positive student interactions, and mixed results for student learning.

CHAPTER 5

SUMMARY AND DISCUSSION

The purpose of this study was: (a) to better understand the steps and processes whereby teachers develop increasing expertise in their use of academic choices, (b) to explore relationships between a teacher's understanding of key concepts related to academic choice provision and types and contexts of choices, and (c) to explore relationships between the apparent outcomes of academic choices for students and the types and contexts within which choices are provided. The following research questions guided my data collection and analysis:

1. What contextual factors most influence teachers' and students' use of academic choices?
2. To what extent does a teacher's implementation of academic choices change over time given ongoing support?
3. To what extent does a teacher progress in her understandings of key concepts related to choice provision as she progresses in her practice?
4. To what extent do academic choices affect student outcomes?

In this chapter, I will summarize the findings relevant to each of the above research questions followed by a discussion of those findings and recommendations for future research.

Summary of Findings

The Action Research/Learning Cycle and Teacher Growth

The complementary cycles of "look, think, act" (Stringer, 1999, p. 18) and planning, working, reflecting (Black & Ammon, 1992; Clayton et al. 2003) provided an effective structure for supporting Ann's growth in both her practice and her conceptual understandings of concepts related to choice provision. As researcher I shared data, provided support, and facilitated Ann's thinking and planning through the use of questioning and offering suggestions to be used at Ann's discretion. Ann took a leadership role in planning and implementing academic choices while I encouraged her to reflect on her practice and ways she might change and improve upon it. As her students used this cycle of planning, working and reflecting in their work with choices in conjunction with its use by Ann and by me, the student outcomes of choice work improved.

Contextual Factors

The contextual factors that had the greatest impact on Ann's planning, implementation, and assessment of academic choices were (a) time pressures, (b) high-stakes testing, (c) required curricula, (d) students' prior knowledge, and (e) teacher support. The first three factors were inter-related. Because of an emphasis on the need for students to pass high stakes tests, a district-wide mandatory curriculum was in place that was intended to address the content of the tests. Another factor that Ann perceived to be increasingly crucial to the successful use of academic choices as the year progressed was the related prior knowledge that students held. Students needed enough academic skills, such as those used for reading and writing, and enough relevant content knowledge to have a basis for making good choices and for implementing their choices with a reasonable degree of independence. Ann reported that the most positive factor contributing to her development of academic choice provision was the ongoing support that I provided in my role as action researcher. The structure of planning, working, and reflecting in which we engaged together supported Ann to develop and grow in her ability to provide academic choices to her students in ways that she found satisfying despite the contextual factors that made this more difficult.

The Development of Implementation and Understandings of Academic Choice Provision Over the School Year

Ann's development of her use of academic choices as a regular instructional strategy was characterized by her efforts to find and enact an optimal balance between student and teacher input into learning and instruction. Contextual factors such as lack of time, high stakes testing, and the required curriculum pushed her toward a high degree of teacher input and direction as did her students' gaps in prior knowledge that was necessary for productive, independent input. Ann held a conviction that having input into their learning through the use of academic choices empowered and motivated her students, however. In her first interview, she defined empowerment as being allowed to do things you want to do which led to work of which students could feel proud, thereby increasing their self-esteem. She was convinced that choices would help her students feel good about themselves. This conviction pushed her toward increasing such opportunities for student input.

Over the course of the school year when implementing academic choices, Ann moved from taking a primarily directive role in which student choice functioned as an "add-on" intended only to assess learning gained from teacher-centered instruction to a somewhat more facilitative role in which student choice was an integral part of instruction and assessment. As she engineered increasingly greater degrees of balance between student and teacher input into important aspects of lessons, Ann's focus for planning lessons and assessing student learning involving academic choices shifted from an emphasis on the products of learning to an increasingly balanced emphasis on both products and processes of learning. Her students moved from a high degree of dependence upon her for successful completion of choices to greater independence in planning, working, and reflecting upon their work.

Ann's conceptions of the place of academic choices in curricula expanded to include a wider variety of types, from narrow to broad and open-ended to prescribed choices, from choices of products only to choices of both products and processes. She came to see that there were many ways to offer academic choices depending upon her goals and the nature of related contexts. As a result, over time, Ann became comfortable using academic choices to meet a wider variety of types of lesson goals than she had at the beginning of the year.

Ann's development of her implementation of choices corresponded to the beginnings of a shift in understandings about the nature of learning and curricula. Learning activities were no longer an end in themselves, but a means to reach pre-determined learning goals. How the goals were met could be flexible. In conjunction with this fledgling understanding, Ann began to see herself as a designer of curriculum as well as an implementer of it. Academic choice was beginning to become a strategy she could use in curriculum design rather than merely a structure for enrichment activities. Still valuing student empowerment as an important rationale for choice provision her conceptions of empowerment expanded to include the idea of students as contributors to their learning by taking on challenges and investing deeply in self-initiated activity as well as being able to feel pride in their academic products.

Student Outcomes

Student outcomes included (a) positive student engagement in choice activities, (b) improvements in the quality of academic products produced during lessons involving academic choices, (c) some tendency for more positive student interactions, and (d) mixed outcomes for the effects on student learning. Positive engagement occurred consistently when academic choices were provided regardless of the type of choice and included three sub-categories. They were (a) enjoyment of activities, (b) on task behavior, and (c) initiative, or acting on an independently generated idea. Improvements in the quality of products and of student interactions were primarily noted during broader types of choices. Ann felt that learning outcomes improved as a result of most of the narrower types of choices provided, but she expressed doubts about the learning outcomes of the broader types of choices.

Discussion

The findings of this study illustrate the complexity of academic choice provision in classroom settings. Choice provision is ostensibly a simple strategy for promoting self-determination and increased engagement in learning, but the possibilities for ways to use it are many and the uses and outcomes of choice depend upon many factors. These factors range from the nature of teachers' understandings and students' prior knowledge to a variety of contextual influences. This study increases the information that is available to researchers and teacher educators about many of these factors.

Self-Determination Theory and Student Outcomes

The student outcomes for academic choice provision in this study reflect those of other research, but questions may be raised as to whether it was choice or some other factor, such as Ann's increased attention to developing these lessons and the extra support from me that led to these outcomes. The focus of this study was, in fact, upon identifying important and inter-related variables that influenced choice provision and outcomes and no attempt to isolate choice for its effects on students was made. Self-Determination theory would indicate that the presence of choices for students did influence these outcomes, however, and provide an explanation as to why it did so.

According to Self-Determination Theory, the students' sense of autonomy was supported when they were given choices about aspects of their curriculum because they were able to exercise some control over the situation. Their sense of competence was heightened when Ann provided choices that gave students increased input into their learning as well as their work products. As they became more independent of their teacher for successful work they also increased their positive interactions with each other, sharing ideas and offering support, thereby increasing their sense of relatedness. These three perceptions – of autonomy, competence, and relatedness - make up the components of a sense of self-determination, which leads in turn to greater intrinsic motivation. The observed outcomes of increased enjoyment, task focus, and initiative correspond to behaviors associated with intrinsic motivation. Thus, it is likely that academic choice provision did contribute to these outcomes in important ways.

The improvement in academic products may also be directly related to increased intrinsic motivation, or it may have arisen as Ann became more proficient at addressing students' need for prior knowledge before they made their choices. In this case, choice provision would have had an indirect influence on this outcome. The need for students to make informed decisions and work with a certain degree of independence when undertaking choice work directed Ann toward providing the prior knowledge, which, in turn, increased students' perceptions of autonomy and competence as they undertook choice activities. These perceptions would then lead to an increase in students' intrinsic motivation and well as their abilities to do their best work according to self-determination theory.

Factors That Influence the Implementation and Outcomes of Academic Choice

Researchers, practitioners, and theoreticians have named many positive reasons for teachers to include academic choice provision as an instructional strategy. Self-determination theorists propose that providing choices is a prime strategy for supporting students' sense of autonomy and thus increasing their intrinsic motivation to engage in school activities. Ann found such choices to add benefits to her students. She particularly enjoyed their increasing investment and independence in learning activities. Providing academic choices was a much more complex activity, however, than is commonly acknowledged in the literature that addresses it. This complexity may be the reason that

practical implementation of such choices occurs less in classrooms than might be expected and that when the strategy is employed its impact on student learning or engagement is not always positive (Barry et al., 1997; Cordova & Lepper, 1996; Dyer et al., 1990; George, 1977; James, 1995).

Although the contextual factors and student outcomes identified in this case study mirror those of much of the research on academic choice provision, no previous study has addressed so many factors at once. The findings add information that may help to explain some of the complexities that likely influenced the findings of other research. This study highlights factors not widely considered when researchers examine the use of academic choices and their relationship to student outcomes. These include (a) the state of student prior knowledge, (b) the types of choices used, (c) the practitioner's conceptual understandings and development of practice, and (d) the amount and nature of the support teachers receive. The importance of each of these factors may be explained in light of self-determination theory.

Student Prior Knowledge and Models of Instruction

The importance of students' prior knowledge in relation to their use of academic choices has been established in other research (Garland, 1995; Rice & Linn, 1978; Stanne, 1999; Turner, 1995) and this factor became central to Ann's awareness as she developed her ability to plan for successful academic choices. It seems reasonable that a certain amount of prior knowledge related to the content and processes of choice activities would be necessary to provide students with a sense of competence as they consider what choices to make and how to go about completing the work of those choices. Without the knowledge that affords feelings of competence, the sense of autonomy that the act of choice-making should enhance may be undermined. Students do not posses a strong basis for making informed, personally meaningful decisions. Choice-making is likely to become more random and more influenced by external factors such as perceptions of the teachers' preferences or those of admired classmates. In Ann's case, the state of students' prior knowledge appeared to be pivotal in providing the conditions under which choice might lead to increased intrinsic motivation.

Ann was surprised to find that knowledge and skills that she had assumed students to have such as coin values or poster making were not in place for many. It is difficult to determine why she

should have been surprised by the children's gaps in knowledge considering that she had worked in this school with children of similar backgrounds for the past 12 years. Possibly, she was more aware of gaps in the children's knowledge and skills because she was attempting to give them more choices which required that they draw upon a certain amount of personal resources for independent action that were not needed in the more traditional lesson formats. In that case, it was the academic choices themselves that revealed gaps that may have existed in students of previous years as well. Another possibility is that students actually did possess less knowledge than students of previous years, though Ann reported that overall she found her homeroom class to be a bright and capable group, and she was pleased with the progress of her low ability mathematics students. If over the past few years, which include all of these students' years in elementary school, many teachers have emphasized increasingly passive models of learning due to the pressures of tests, time, and curricula, they may well have had fewer opportunities to learn to use tools, interact with materials, or design creative projects. Additionally, the tendency to rush through content delivery without taking time for experiences that would help students develop true understanding of important concepts could easily lead to less mastery of content knowledge that teachers expect children to know. Either or both of these phenomena could explain an apparently sudden change in the amount of prior knowledge the children bring to tasks that call for such skills.

Ann's recognition that her students did not have the foundation in content knowledge or skills needed to succeed at independent choice work she intended to provide led her to focus more on addressing their prior knowledge needs and to become more skilled at doing so over time. This focus, in turn, facilitated the growth of a sense of competence in the children that energized their intrinsic motivation to learn and become more deeply engaged in choice work.

The Importance of a Repertoire of Types of Choices

Ann's shifts in understandings in regard to learning and implementation of academic choices seemed to evolve in conjunction with growth in her repertoire of the types of choices she could draw upon as she planned lessons. As her knowledge of different ways to provide choices grew, her sense of

competence and her ability to plan and evaluate her choice lessons with greater autonomy grew as well.

Ann began by conceiving of academic choices as including only broad types of choices calling upon a great deal of student input. As a result of her experiments with using such types of choices for learning, Ann began to consider other approaches to choice provision. The movement between narrower choices that provided small amounts of student input into largely teacher directed lessons and broad choices that provided a great deal of student input in relation to teacher direction, along with regular reflection, seemed to slowly guide Ann toward greater balance between the two extremes so that by the end of the year, her implementation of broad choices had shifted toward more balance between teacher and student input and between academic products and processes. Information and practical guidelines about the use of different types of choices such as those used by Ann may be an important factor in teachers' growth in their ability to implement academic choices effectively as instructional tools.

Initial Conceptions of Learning and Implementation of Choices

Ann's planning and implementation of academic choices was inextricable from her understandings about the nature of learning and curriculum. When our work together began, Ann's understandings about these concepts were similar to those of Johnston's (1989) Category One teachers and Bussis et al. (1976) Orientation B teachers. As she and I engaged in the planning, working, and reflecting cycle, her conceptual understandings regarding learning began to evolve along with her ability to use a broader array of types of academic choices. The action research cycle appears to have provided an effective structure for enhancing Ann' sense of self-determination and thereby energizing her intrinsic motivation to learn and grow. Ann's growth was self-directed and self-paced. It affected her understandings and beliefs as well as her practice.

Just as Johnston's (1989) Category One teachers did, Ann initially believed that learning meant the acquisition of information that has been determined to be important by authoritative sources external to students such as textbooks, teachers, curriculum guides, or district and state guidelines. She understood curriculum as a static body of information that must be delivered intact rather than

developed in conjunction with the interests and prior knowledge of students. Teaching and providing choices were two different things. Ann did not think that student choices related at all to individualized instruction, for example.

Further evidence of this orientation toward teaching and learning may be found in the highly directive nature of the roles Ann enacted as she implemented choices throughout the year, but especially during the fall. The roles of instructor, manager, and coach all involved Ann directing her students and these were the roles most in evidence. Instances of facilitation such as stimulating student thinking with open-ended questions or problem solving activities were rare, though they increased somewhat in the spring. Ann had learned from professional training that good curricula included active, hands on experiences and reflection on those experiences, and she professed to believe this, but when time was tight, the findings indicated that she dropped the active learning processes in favor of lecture and demonstration and the production of products such as written reports, posters, or workbook pages. She justified such decisions on the basis of the need for the children to learn more than they could if time were spent on activities that engaged the children in active learning.

Ann apparently believed that passive transmission models of teaching were best suited to preparing students for high-stakes tests. This may be an assumption she shares with many other teachers who report that time, testing, and required curricula are obstacles to choice provision (Denton, 2003; Garcia-Gonzalez, 2000; Glessner, 1997; Heweker-Hoy, 1998; Yamzon, 1999) Whether this is true or not is not clear. This attitude may reveal more about limitations of these teachers' conceptual understandings about the nature of learning than about actual limitations imposed by the tests and accompanying curricula. Much of the required curricula in Ann's school actually called for student centered approaches with many hands-on activities to foster increasing understanding and construction of knowledge by students (e.g. Observed Lessons Four, Five, and Seven). Yet Ann was not alone in her belief that taking time for active rather than passive learning was counterproductive to passing the MCAS and the pressures to cover an enormous amount of content were very real. Before academic choice provision is likely to become a common strategy in classrooms, teachers may need to know of practical ways to use it that will help students master curriculum requirements and pass

important tests within the time frames provided. Ann's efforts in this study provide a strong start toward this end.

In conjunction with her conceptions of learning as we began the study, Ann believed that the main value of academic choices was to allow children to do things that made them feel good in school. Like the Orientation B teachers of Bussis et al. (1976), student pursuit of interests was associated with fun, enrichment activities rather than those that were integral to learning important curriculum content. The idea that students could make choices that allowed them to bring their intrinsic interests to bear on aspects of the required curriculum or to make the types of personal connections that facilitated the active construction of knowledge did not seem to occur to her.

Changes in Practice and Understandings

In conjunction with her Category One (Johnston, 1989) and Orientation B (Bussis et al., 1976) status, Ann's attempts to balance teacher direction with student direction were characterized by first giving students very little direction, then returning to her more typical highly directive roles when students did not succeed at providing the self-direction that Ann had expected. In Observed Lesson One in which students chose between options for ways to make study guides, this meant that students needed even more teacher direction than they would have without choices. Simply providing choices was not enough to foster a sense of autonomy when the children did not possess the background knowledge needed to make independent decisions. Ann noted that she couldn't have led the group successfully through the creation of the guides without all three of the teachers, each of whom directed students through a different option. There was no bridge between teacher direction and student direction. If Ann was not directing learning, then she seemed to believe that the only other option was for students to direct learning. Because learning meant the intake of information, opportunities for broad choices meant that they were on their own to figure out what information to take in from the available books and websites.

This approach did not work well for Ann. Students did not seem to make good decisions about what information to learn. In Observed Lesson Four, for example, Ann initially assumed that the high levels of motivation and affective engagement that the children demonstrated when given choices

about how to teach the concepts would automatically translate into increased learning. This assumption was built upon the more basic assumption that learning consists merely of taking in information from outside sources. Under this assumption, if children are motivated enough, they will be receptive to information and learning will occur. Her students were highly motivated, yet the learning she hoped for did not occur. The children's attempts to demonstrate earth science concepts conveyed inaccurate understandings. Evidently, students' sense of self-determination and intrinsic motivation was in place, but without more teacher facilitation their energy was not necessarily directed toward the most productive activities for learning the required material.

Ann's dissatisfaction with the results of this lesson led her to reflect on what went wrong. She expressed a realization that her students had needed more time and support to develop the understandings that their choice activities were intended to convey, but she still thought that the way to do this was to provide yet more books and internet resources rather than more active experiences that would allow students to explore and actively construct understandings. This belief seemed to remain in place throughout the year, despite other changes in her practice and understandings relating to academic choice provision.

Conceptions of curricula as bodies of information remained as Ann began to attempt to incorporate choices into instruction. The processes involved in learning were not perceived to be as important as the ability to produce products that enabled students to show that they had accumulated a set of facts they could recite. Choices, therefore, consisted primarily of options among possible academic products such as posters, poems, or reports that provided various formats for reciting information, rather than choices related to academic processes in support of learning such as problem solving or observation. Even after a year of implementing academic choices and much change and growth, her use of choices indicated that this conception of learning was slow to change. Despite some important shifts in the nature and goals of choice provision, the final social studies unit still emphasized choices of content (what facts to read and record) and student products (bulletin board displays and essays). Ann was not involving students in the first hand construction of knowledge through inquiry and problem-solving.

Although Ann's conceptions of learning did not seem to change much over the year, there were indications that some other conceptual changes were beginning to take place as her practice changed. She was moving closer to the more sophisticated concepts of teachers in Category Two (Johnston, 1989) and Orientations C and D (Bussis et al., 1976). Like Category Two teachers (Johnston, 1989) Ann, in planning her final observed lesson, seemed to understand that curriculum could be open-ended as long as broad learning goals were met and that curriculum could come from a variety of sources. She began to separate the overarching goals for learning from the ways to reach them. She also reflected the understandings of Category Two when she began to shift from more to less directive roles and foster more peer interactions among students. As Ann began to assume the directive instructor role less frequently and to increase her time as manager, coach, facilitator, and observer, this change in the roles that dominated choice provision indicated greater comfort with a certain amount of student direction in learning.

Ann was able to make broad academic choices more integral to her instruction because she had discovered ways to increase the balance between teacher and student input. Whereas there had been few or no bridges between an entirely teacher directed lesson and student direction of learning earlier in the year, such bridges were carefully constructed and utilized in the final social studies unit. The bridges between Ann's input and that of the students came in the form of prior instruction in independent use of resource materials to find information and a set of guidelines that she developed for the children (Appendix K) as they made choices about their learning. This facilitated the children's ability to make more informed decisions, thus their sense of competence and autonomy. Ann was beginning to build the bridges between student direction and teacher direction that would enhance her students' ability to direct their intrinsic motivation toward more productive learning experiences.

Ann's understanding of the meaning of empowerment shifted to include student initiative and action as central themes, an important change from her first definition, which placed students in a more passive role. Initially, empowerment was about students feeling good about themselves because they had been allowed to do something they wanted to do, an understanding that corresponds to those of teachers in Orientations A, B, and C of Bussis et al. (1976). Rather than supporting students'

personal sense of autonomy and self-determination, Ann understood choice to be a way for teachers to manipulate student behavior by granting favors to them.

In June, she described empowerment as involving students acting on their own initiative to take on challenges and responsibilities. "It has to come from their heart and soul," she said in her last interview. Ann's understanding of empowerment had shifted so that it more closely matched that of teachers in Orientation D (Bussis et al., 1976) who were more advanced in their understandings and uses of student choice. She was moving toward a conception of choice provision as a way to foster genuinely intrinsic sources of motivation rather than to manipulate their behavior through external motivators such as the granting of favors. This more advanced understanding of the meaning of student empowerment may be necessary for teachers optimal use of choice provision to enhance students' intrinsic motivation for meaningful learning.

It was not until we began to plan the final observed lesson that Ann announced that she had realized that it was essential to know what the goals of a lesson were before planning what the choices would be. For the final co-planning session, Ann began by determining what she wanted the children to learn, not at my insistence, but at her own initiative. It appears that something significant had shifted in her thinking about curriculum and instruction. It had become more interactive and open-ended, incorporating more possibilities for student input and initiative. It required more teacher structure and planning than more directive models, perhaps, but it was also more satisfying and empowering for her as a teacher because it was more satisfying and empowering for her students. Even with continuing doubts about the effectiveness of choices for advancing student learning, Ann expressed great satisfaction with that final social studies unit and awareness that she had grown significantly in her understanding of how to use academic choice as a vital, regular part of her teaching. Her learning was likely so deep and satisfying for her because it was guided by Ann's own sense of self-determination rather than by external mandates and direction.

Teacher Support and Teacher Growth

The pressure generated by the high-stakes nature of the MCAS, and carried over into the development of curricula that could not reasonably fit into the time frames allotted, worked against

Ann's use of academic choices. She felt pressured to cover the required curriculum even if it meant lecturing. She felt the need to have her students produce the products of learning to show they were progressing through the curriculum even if it meant shortcutting the processes of learning that would lead to genuine understanding of the curriculum content. These pressures came from external sources and generated a fair amount of anxiety as was evident when Ann shared that if students did not perform well on the MCAS "your school is in jeopardy . . . Principal can fire you!" (Interview, 4/24/04).

The demand that her students pass the MCAS put pressure on Ann to accomplish something over which she did not entirely have control. Many of her students had significant difficulty with mathematics and reading, yet she was required to teach a standard curriculum for which they did not have the prior knowledge necessary for successful learning. She did not have time to teach all that was required, so the need to teach skills that curricula developers assumed students already possessed increased pressures on Ann even more. Other studies have also found that when teachers feel controlled by external demands and implicit threats as Ann was, they are much less likely to support student autonomy through choice provision and more likely to be demanding and controlling of their students (Deci et al., 1982; Ferree, 1997; Pelletier et al., 2002). Lacking a sense of self-determination and choice, they pass the same pressures along to their students.

The cycle of Planning, Working, and Reflecting that structured my interactions with Ann and her interactions with the children fostered a sense of self-determination that energized growth in our understandings about and uses of academic choices by fostering a sense of autonomy, of competence and relatedness. In light of the contextual factors that seemed to create obstacles to choice provision, the role of my interactions with Ann and of the structures of action research in her growth in the use of academic choices appears to be considerable. Despite the forces that make this strategy difficult for teachers to use, regular opportunities to plan, work, and reflect with a supportive professional led not only to increased use of choices, but also to the development of some ways that academic choices can be used to meet the requirements of current institutional contexts. The changes Ann underwent required commitment on her part, the support that I provided, and regular engagement

with the cycles of planning, implementing, and reflecting that provided the structure for our work together.

Commitment to Growth

That student choice could be a part of instruction was a confusing concept for Ann in September, but one that she must have believed to be true to some extent; otherwise she would not have made such great efforts to develop her ability to use choices in this way over the course of a year and in the face of institutional contexts that made time, high-stakes tests, and a required curriculum pervasive factors that worked against such practices. It was Ann's intrinsic motivation to challenge her comfort levels in order to incorporate academic choices into her instruction that was fostered by the support she received through the structures of this action research project that shaped and energized the directions of her growth. This self-initiated challenge catalyzed her shifts in conceptual understandings about instruction. Ann began experimenting with the first observed lesson and continued to do so throughout the year. Her perseverance was aided, no doubt, by the fact that she was an experienced and self-confident teacher, highly regarded in her school. She believed herself competent and strong enough to take risks.

Regular Professional Support

Even with such determination on Ann's part, it is not likely that her development would have occurred at the pace, or in the direction that it did, without my support. Had I worked in her classroom only as a researcher collecting data and taking no part in her planning and reflecting about choice provision Ann might well have taken a different direction. As an action researcher, I was able to function as both an outsider and an insider in Ann's work,in a faciltativie rather than a directive stance. As an outsider, I provided a mirror by first documenting, then sharing my observations of class sessions and interactions with students. I provided the structure of the planning, implementing, and reflecting model and was a resource with information and experiences related to academic choice provision from outside the constraining contexts of Ann's school. As an insider, I helped Ann plan by raising questions and insisting on certain protocols, such as the identification of learning goals and prior knowledge requirements for choices, which Ann did not naturally consider on her own until later

in the year. I assisted her reflection process in similar ways. In addition, I was able to experience choice implementation as an insider when I planned and executed a science lesson over a period of four days. This experience was invaluable in providing me with an insider's view of the contextual pressures that Ann faced and helped me to better understand the contexts within which she worked. The support I was able to provide Ann through observations and questions most likely helped her to continue to problem-solve and experiment with choice provision when her occasional bouts of frustration and discouragement might have led to abandoning development of choices without such support.

As a facilitator rather than an evaluator of Ann's efforts I was guided by Self-Determination Theory to engage in non-controlling interactions with her that promoted her sense of autonomy, competence, and relatedness just as her use of academic choices did with her students. I provided feedback in the form of observations and promoted reflection in the form of open-ended questions. I also made suggestions, but was careful to present them as choices that Ann could use, adapt, or not use at all. In interviews my focus was upon understanding her perspective on her work rather than giving her advice. This approach helped to build a sense of collaboration and relatedness between the two of us. Ann's sense of competence was supported by non-evaluative feedback from me as well as the leadership position she took in planning for and reflecting upon her use of academic choices. Ann chose her year long focus on finding ways to incorporate choice into instruction, not I. My use of autonomy supportive structures supported her intrinsic motivation to develop as a teacher in directions that were meaningful to her.

The Cycle of Planning, Working, and Reflecting

The cycle of planning, working, and reflecting formed a powerful framework for supporting cognitive growth for Ann. As she became more aware of her planning process and the thinking that went into it, her planning increasingly became an opportunity to solve problems that had arisen in past lessons through proactive thinking. Regular reflection about her implementation of choices and the feedback obtained from my observations raised her awareness of both successes and issues. Examination of what went wrong when choice activities did not go as planned provided a powerful

impetus for change and growth in her practice. As Dewey (1938/1963) pointed out, it is only experiences followed by reflection on the experiences and then the development of subsequent experiences that build on insights gained that lead to education. Ann's decision to try out ways to incorporate choices that would lead to learning was not enough to achieve the growth that she did without the discipline of the planning, implementing, and reflecting cycle.

Types of Choices, Contextual Factors, and Student Outcomes

The degree to which academic choices improve learning may depend to some extent upon whether teachers use broad or narrow choices. Outcomes varied consistently with the types of choices that Ann offered. Narrow choices produced satisfaction with student learning outcomes and levels of engagement, and broad choices produced satisfaction with levels of engagement, perceptions of improvement in student social interactions and academic products, and dissatisfaction or questions concerning student learning. That narrow choices did not seem to impact the quality of student products or social interactions as broad choices did, but did seem to result in greater learning may be due to the fact that these choices were offered within lessons that did not require Ann to change her general approach to instruction to the degree that lessons incorporating broad choices did. Having children choose which 4 of 12 minerals to study, what clues to use for riddles, or what question to answer in a journal entry require only small adjustments in implementation. Textbooks and curriculum guides can still be easily employed. Ann did not need to design curriculum herself to employ narrow choices. There was also less need to assess and develop students' prior knowledge with narrow choices. Such types of choices felt more comfortable and safe to her.

Broad choices did require curriculum design. They required that Ann hold a clear understanding of her goals for student learning as well as student engagement and that she know how to create structures to bridge the gap between wholly teacher directed instruction and wholly student directed instruction. She needed to spend more time assessing and developing students' prior knowledge in order for the choices to lead to productive engagement with required content and skills. Ann evolved in her ability to do this over the course of the study, but it was not easy. By the end of the year she was just beginning to form some key understandings and strategies that allowed her to begin

to effectively balance teacher and student input. It seems likely that until she has mastered such aspects of curriculum design student learning will not be as effective when choices are broad. The potential for increased learning when a masterful teacher offers broad choices, however, may be much greater than the potential for increased learning with narrow choices. Narrow choices may increase engagement and therefore lead to better performance when meeting short-term learning goals and end of unit assessments, but they may be less likely to generate the kind of applications and personal construction of meaning that can become part of long-term memory banks.

Assor et al. (2002) found that simply providing academic choices led to less student engagement than instruction that fostered the development of personal meaning in regard to academic content. Broader choices may be more likely to foster the development of personal meaning for students because they can draw upon broader ranges of interests, talents, and learning styles and incorporate more possibilities for action as well as option choices, which Reeve et al. (2003) found to be more associated with a sense of self-determination. They can offer more possibilities for students to have experiences that foster increased personal connections and understandings in regard to academic content. Such experiences that promote both self-determination and personal connections to content are more likely to lead to learning that will be remembered and can be applied in a variety of situations – the type of learning that will stand students in good stead on standardized high stakes tests.

For teachers with the conceptual understandings and skills to develop broad choices in ways that clearly lead to student learning, these types of choices may also provide the most support for teachers' own sense of self-determination. Ann, herself, preferred to use broad choices, perhaps because planning and implementing them promoted her own sense of competence, autonomy, and relatedness to her students to a greater extent than simply tweaking externally developed lessons as she did when using narrow choices.

The provision of broad choices seems to work best, however, when it occurs as part of an approach to teaching that conceives of learning as actively constructed, of student interests and input as integral, of the processes of learning as being as important as the products, and of the value of student initiative and independence over passive compliance. As Ann's practice and thinking began to

shift from more traditional, teacher centered models of teaching and learning, her ability to plan and implement effective choices that were broad in nature improved. With more time and support to improve further, it may be that student learning will increase with broad choices far more than it seemed to do with narrow choices.

Conclusions and Recommendations

The findings of this study point to some conclusions that hold implications for future research and teacher education regarding choice provision. Academic choice appears to be a powerful, yet complex instructional strategy that is affected by many inter-related factors. Based upon the findings of this study, I propose the following conclusions:

1. Contextual factors appear to influence teachers' abilities and willingness to structure student choices that impact curricula and that address the processes of learning as well as the products students generate as a result of learning.

2. There are a variety of types of choices that teachers and researchers may offer students. Different types may be more or less successful within different contexts and may produce different student outcomes.

3. There is a need for practical ways to provide ongoing support for teachers as they develop skill with academic choice provision

Contextual Influences on Academic Choice Provision

Findings of this study indicate that contextual factors related to the presence of high-stakes testing, students' prior knowledge, and teacher support exerted a strong influence on Ann's willingness and ability to provide choices in a way that positively affected both her delivery of curriculum and student outcomes. These factors are likely to be a major influence on the outcomes of academic choice in other research as well and need to be considered in the methods as well as in the interpretations of the results of such research. Pressures on teachers such as those generated by high-stakes testing tend to drive the adoption of required curricula that are not necessarily developmentally or academically appropriate for all students and often contain more content than teachers can possibly address effectively within the time frames given. In Ann's case such pressures influenced her to short-

cut active learning experiences for students including those of choice making. In addition, her initial understandings of concepts central to curriculum delivery led her to believe that although having choices was fun, children would learn more of the required curriculum if they did not take the time for choice activities. This belief may have been reinforced by the nature of the required curriculum and stated expectations for teaching it in her school. It influenced her ability to use choices effectively, which in turn influenced the outcomes of choice provision and Ann's perceptions of those outcomes. Ann's conceptions of the nature of learning may have caused her to doubt that learning was taking place when she provided broad types of choices for Social Studies even when her class' average score on a district-wide test was higher than those of other fourth grade classes in her school (Interview, 6/9/04). Future research on academic choice would benefit from a consideration of the nature of participant teachers' understandings and past experiences with academic choice provision. All teachers will not hold the same types of understandings about or experience with choice provision and this will influence what and how choices are provided.

One of Ann's first realizations as she practiced academic choice provision was that the state of students' prior knowledge of content and skills related to making and following through on choices was a central factor in the success of lessons including choices. Because making and following through on choices requires a certain degree of student independence, prior knowledge will necessarily impact the quality of students' choices and resulting work.

Outcomes and Uses of Different Types of Choices

There are clearly different types of academic choices that may by offered to students and each type may be effective in different contexts and produce different outcomes. Further delineation of the types of choices that teachers may provide and the conditions under which each type is best used would provide helpful information for teachers as they develop their implementation of academic choices. This study offers a place to start with this delineation with the two main categories of broad and narrow choices. Each of these categories of types of choices may present different strengths and weaknesses.

Broad choices would seem to offer the most potential for students to make personal connections and meanings in regard to the curriculum. Given broad choices, it is probably more likely that they would develop that sense of ownership and personal responsibility for their work that Ann so enjoyed in her students. Broad types of choices also offer useful ways to structure entire units of study. Broad types of choices seem to have limitations as well. They may be less useful for inclusion in single lessons as they are likely to require more time for the phases of planning and reflecting than narrower choices do. Optimal use of broad types of choices may require that teachers conceive of learning as actively constructed, of the teacher's role as facilitative, and of curriculum as coming from a variety of sources; in other words they must utilize student-centered approaches, particularly if the choices are to lead to increases in student learning. Apparently, this is not necessarily true of many teachers (Bussis et al., 1976; Johnston, 1989). It also appears that students must have more prior knowledge that allows them to work with high levels of independence for best use of broad choices.

Narrow types of choices seem to work well within more passive, transmission models of instruction. They appear to be easier for teachers to incorporate even within the pressured contexts of high-stakes testing and required curricula. They are more easily fit into tight time frames because they require much less time for student planning and reflection. Students do not need as much prior knowledge as they do not need to work with as much independence as they do with broader types of choices. Narrow choices seem to be an effective way for teachers and students with less experience of choice provision and student-centered approaches to begin to gain that experience. Narrow choices also may present an important downside, however. Such choices may not be as personally meaningful to students and therefore may not have the same impact on students' sense of ownership and responsibility as broader choices. They may not generate the same degree of deep engagement or personal connections in learning, but they may help teachers begin to make choices more integral to instruction just as they did for Ann.

The Need for Practical Ways to Support Teachers

Coursework, workshops, and professional literature may motivate teachers to implement academic choice and may provide a basis for initial ideas as to how to start, but they are probably not

enough on their own for many teachers to develop proficiency with this strategy. Judging by Ann's activities in this study, teachers can improve the frequency and effectiveness of their delivery of academic choices if, in addition to literature and coursework, they undertake regular practice providing choices within a framework of self-initiated planning, working, and reflecting cycles in combination with ongoing professional support. Such support for Ann was built in to the design of this action research study, but it is not a practical model for use with many teachers over many years. Development of practical ways to provide such support to interested teachers seems to be important if the use of academic choices is to become more common and productive in schools. Structured guides for planning and reflecting on choice provision that draw upon protocols similar to those used for this research might be developed, for example. Such guides could be used in conjunction with support from mentors or supervisors, or they could be used to guide a peer support group. Models for action research projects addressing teacher selected research questions related to choice provision might also provide guidance to teachers in conjunction with peer or mentor support.

Recommendations for Future Research

Future research might examine and compare the use of various models for teacher support systems as to their practicality and effectiveness. There is a need to explore aspects of interactions between teachers and action researchers and others who provide external support to teachers as well, and to gain more information about how different approaches and factors relating to this relationship affect the quality of choice provision. More research is also needed to further delineate types of choices within the two broad categories identified in this study and to determine which types are most productive under different conditions. Researchers might consider whether certain types of choices may be more likely to lead to improvements in learning as measured by standardized tests, for example.

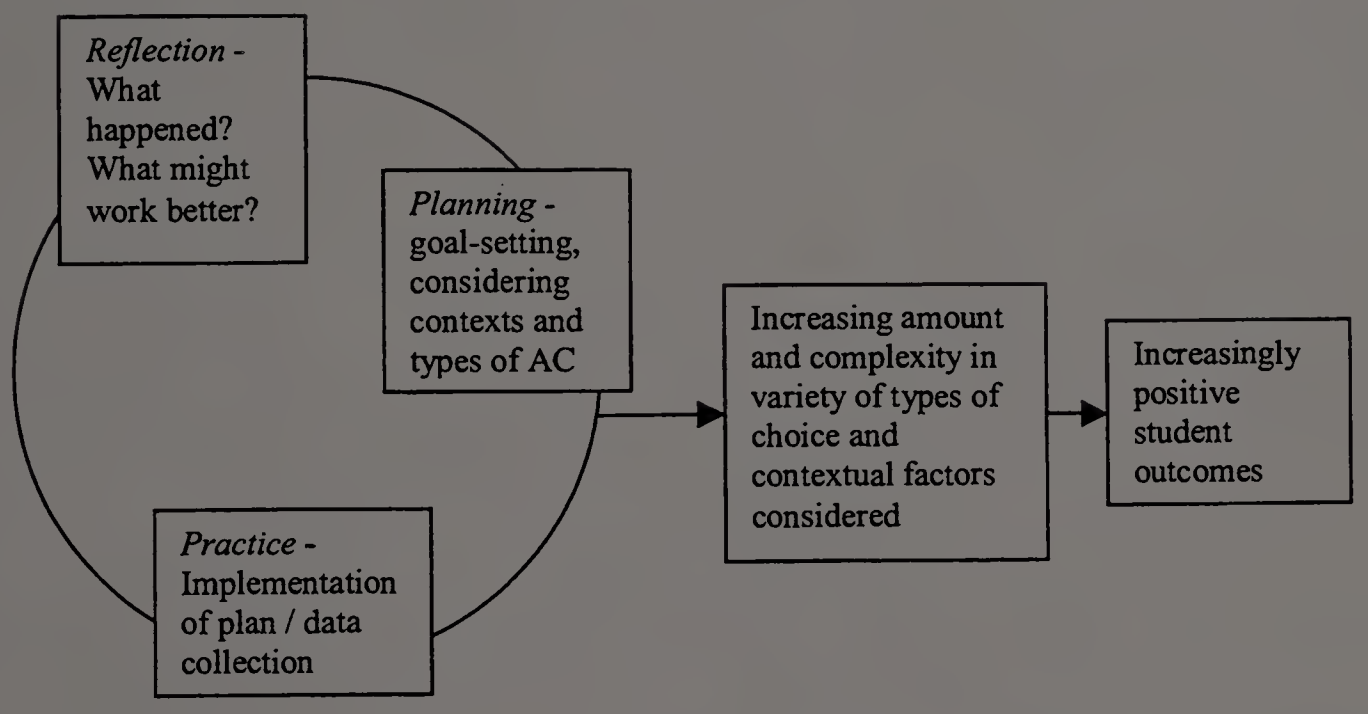
This field study was limited to one classroom and a single fourth grade teacher. Future research might consider a broader array of teachers including teachers of different grade levels, amounts of experience, cultural backgrounds and different types of student populations. In addition, more information is needed about the role of students in the development of successful academic

choice provision. Do students of different abilities do best with different types of choices? What impact do students' prior experiences with choices both inside and outside of school have on the nature and outcomes of choice provision? Do children of different ethnic and socioeconomic groups tend to have different sets of prior experiences and assumptions regarding choices?

Apparently there is more to successful academic choice provision than simply offering any random type of choice that occurs to one regardless of specific contexts and goals. Some approaches to choice provision may even reduce learning. If academic choices are to be used successfully, the choices need to be one that will effectively guide students toward meeting thoughtfully selected learning goals. Academic choices need to provide a way to synthesize the energy and purposes of teachers with the energy and purposes of students. This requires much practice and skill. Teachers can benefit from information and structures that support them to better focus their practice and develop their skills.

APPENDIX A

CONCEPTUAL FRAMEWORK FOR TEACHERS' PROCESS OF DEVELOPMENT IN USE OF ACADEMIC CHOICES



APPENDIX B

TEACHER'S CONSENT FORM

University of Massachusetts at Amherst

Academic Choice Provision in an Urban Elementary School Classroom: An Examination of the Factors and Processes That Lead to Growth in Teaching and Learning

Teacher's Consent for Voluntary Participation

I volunteer to participate in this qualitative action research project and understand that:

1. My name will not be used, nor will I be identified personally in any way or at any time. I understand it will be necessary to identify participants in the dissertation by position and a pseudonym and schools by general demographics (e.g. "Donna" is a fourth grade teacher at "Lawrence Elementary School", a public school in New England serving a diverse, urban population).

2. My students' names will not be used, nor will any student be identified personally in any way or at any time. I understand that students will be identified by pseudonyms and general demographic characteristics.

3. I will be interviewed by Paula Denton 3 times over the course of the school year using a semi-structured interview format.

4. The questions I will be answering address my views on academic choice provision and certain ideas related to academic choice provision, in general, and on academic choice provision as I am implementing it in my classroom in particular.

5. Some students for whom parents have granted written permission will be interviewed regularly over the course of the study.

6. Student interviews will occur at times agreed upon mutually by Paula and me.

7. Students will answer questions that address their experiences with and thoughts about academic choice provision.

8. All interviews will be tape recorded and transcribed to facilitate analysis of the data. I understand that I have a right to read and respond to transcripts of all interviews.

9. Paula will conduct 10 observations of lessons including academic choice provision for which she and I will have collaboratively planned.

10. Paula will collect copies of documents relevant to academic choice provision as they are produced (e.g. communications with staff or parents about academic choice provision, copies or photographs of lesson materials, or student work produced for the observed lesson).

11. Only photographs of student work will be taken. There will be no photos of any teachers, students or anything that may identify teachers or students personally.

12. I understand that Paula will collect and read my plans for and reflections upon one lesson for each full school week that includes academic choice for each week that she does not co-plan and observe in the classroom.

13. As desired by me, the collaborating teacher, Paula will provide feedback for written plans during the weeks that she is not observing in the classroom, and will respond to any teacher questions or concerns by either phone or e-mail.

14. I may withdraw from all or a part of this study at any time.

15. I understand that results from this study will be included in Paula Denton's doctoral dissertation and may also be included in manuscripts submitted to professional journals for publication or in oral presentations at professional conferences.

16. I have a right to review material prior to final oral examination or other publication.

17. I am free to participate or not to participate without prejudice.

18. Because of the small number of participants, I understand that there is some risk that I may be identified as a participant in this study.

_____	_____	_____	_____
Researcher's Signature	Date	Participant's Signature	Date

APPENDIX C

LETTER AND CONSENT FORM FOR PARENTS

September, 2003

Dear Families,

We are excited to report that we will be working this year to study one of the best ways to help your child learn and enjoy learning more. Paula Denton, a graduate student at the University of Massachusetts at Amherst and a consulting teacher with The Northeast Foundation for Children and _____ will work together to plan and study the results of a lesson each week that includes choices your child can make about his or her learning.

Research has shown that providing children with some choices in their lessons will increase their motivation to work and improve the quality of the work they do. We would like to practice providing choices to the students that will better help them achieve learning objectives set out by the state. _____ will plan and teach the lessons, and Paula will consult on the planning, then observe the lesson and interview some of the students about their experience when the lesson is done. Paula may also make copies of some students' work. We are doing this so we can better understand what kinds of choices work best for student learning and how the students feel about having the choices.

This study will also be Paula's dissertation project. She will write about it as her final step toward receiving her Ed.D. degree. *Please be aware that the identity of your child, his or her teachers, and the school will not be revealed in the dissertation at any time or for any reason. We are committed to preserving the privacy of all participants.* Pseudonyms will be used to name all participants and the school.

Attached to this letter, you will find a consent form that provides details about how the study will be conducted and what your child's involvement may be. Please read the form and sign it in the designated space to give your consent for your child to be interviewed.

If you have any other questions about the study now or at any time, please feel free to call _____ at _____ or Paula Denton at (413) 247-3364.

Sincerely,

_____ _____ _____ _____

Paula Denton, Researcher Date Teacher Date

Study of the University of Massachusetts at Amherst

Academic Choice Provision in an Urban Elementary School Classroom: An Examination of the Factors and Processes that Lead to Growth in Teaching and Learning

Consent for Voluntary Participation

I consent for my child to participate in this research project and understand that:

1. My child's name will not be used, nor will any child be identified personally in any way or at any time. I understand that participants will be identified by pseudonyms and general demographic characteristics (e.g. "Ronda" is an 8-year-old Caucasian girl).

2. My child's school or its location will not be identified specifically in any way or at any time. I understand it will be necessary to identify the school by a pseudonym and general demographics (e.g. "Lawrence Elementary School" is a public school in New England serving a diverse, urban population).

3. My child may be interviewed by Paula Denton during or after an observed lesson.

4. Student interviews will occur at times agreed upon mutually by Paula and the student's teacher(s).

5. Students will answer questions that address only their experiences with and thoughts about academic choice provision.

6. All interviews will be tape recorded and transcribed. I understand that I have a right to read and respond to transcripts of all interviews with my child.

7. Paula may collect copies or photographs of academic work produced by my child during observed lessons.

8. Only photographs of student work will be taken. There will be no photos of any teachers or students, students' names on photographed work, or anything that may identify teachers, students or the school.

9. I may withdraw my child from all or a part of this study at any time.

10. I understand that results from this study will be included in Paula Denton's doctoral dissertation and may also be included in manuscripts submitted to professional journals for publication or for oral presentation at professional conferences.

11. I have a right to review material prior to final oral examination or other publication.

12. I am free to allow my child to participate or not to participate without prejudice.

13. Because of the small number of participants, I understand that there is a small risk that my child may be identified as a participant in this study.

_____ _____

Parent's or Guardian's Signature Date

_____ _____

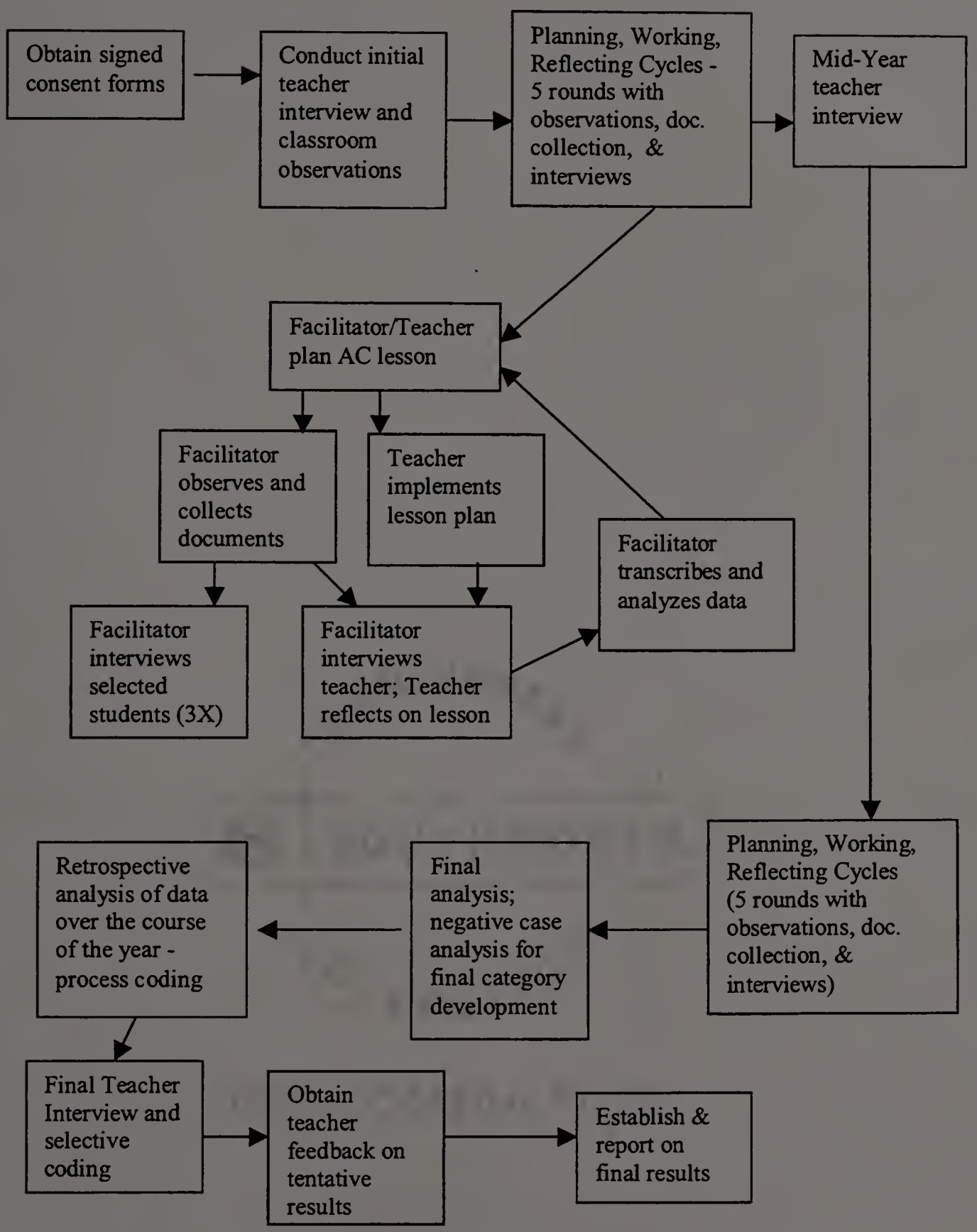
Collaborating Teacher's Signature Date

_____ _____

Researcher's Signature Date

APPENDIX D

FLOW CHART OF PROCEDURES



APPENDIX E

DATA COLLECTION

	Documents	Interviews	Observations
August		Ann - 90 minute	
September	Photos of unobserved student choice work	Ann – 1 30 minute	2 1 hour general observations
October **OBSERVED LESSON 1**	Photos of student work; Email correspondence with Ann – plans/reflections	Ann: 1 reflecting 3 Students: post lesson reflecting	1 90 minute observation of entire lesson
November **OBSERVED LESSON 2**	Photos of student work; samples of student self-evaluations	Ann: 1 planning 2 reflecting	3 30 minute observations
November **OBSERVED LESSON 3**	Photos of student work	Ann: 1 reflecting	1 90 minute observation of entire lesson
November **OBSERVED LESSON 4**	Photos of students working Copies of student plans & peer evaluations	Ann: 1 planning 2 reflecting	3 30 minute observations
December **OBSERVED LESSON 5**		Ann: 2 planning 1 reflecting 5 Students: post lesson reflecting	3 30 minute observations
February		Ann: 90 minute interview	
February **OBSERVED LESSON 6**	Photos of student work Student self-evaluations	Ann: 1 planning 2 reflecting	4 30 minute observations
March **OBSERVED LESSON 7**	Copies of student plans	Ann: 1 planning 1 reflecting	2 30 minute observations
March **OBSERVED LESSON 8**	Photos of student work	Ann: 1 planning 1 reflecting	1 90 minute observation
April **OBSERVED LESSON 9**		Ann: 1 reflecting 5 students: post lesson reflecting	1 90 minute observation
May **OBSERVERD LESSON 10**	Student handout	Ann: 2 planning 1 reflecting	1 30 minute observation
UNOBSERVED LESSONS	Email planning and reflecting document from Ann	Portions of 4 interviews	
June		Ann: 90 minute interview	

APPENDIX F

TEACHER INTERVIEW QUESTION GUIDES FOR IN-DEPTH INTERVIEWS

1. What has been your experience with choice provision in the past?

   a. Will you describe a recent academic choice you have provided for your students?

2. What does it mean to empower someone? How do you empower others?

3. How do you use individualized instruction?

   a. What do you see as the goals of individualized instruction

4. What made you want to be a part of this research project?

   a. What do you hope to get out of this research project?

5. If I were to enter the room during your ideal choice time, what would I see? hear?

6. Why do you believe that academic choices are important for students?

7. What do you see as the biggest obstacles or problems with providing academic choices?

8. How have you most recently gone about planning for academic choices?

9. What are the most important factors in the success of academic choices in your opinion?[1]

   a. for students

   b. for teachers

10. In what ways do you find that children's interests play a part in their learning in school?

    a. What about children who show little apparent interest in any choice activities, or who can't settle down and get involved? How do you handle that situation?

11. In your experience, how do children generally handle choice situations?

    a. Can they make good choices?

    b. On what basis do they choose?

12. What kinds of material resources do you have available in your classroom?

    a. Which resources do you most value?

13. If you had an extra sum of money in your teaching budget, how would you use it?

14. What makes someone a good teacher?

Mid-Year Questions:

1. What would you say has changed about the way you think about academic choice from last August?
2. At this point, what do you see as most valuable about academic choices?
3. How would you describe what you do while the children are working on their choices?
4. How does what you do during students' work time compare to what you would do under ideal conditions?
5. What do you now see as the biggest obstacles to or problems with providing academic choices?
6. How have you changed in your ability to provide AC for your students since the beginning of the year?
7. How has academic choice provision affected your students?
8. What are the most important factors in the provision of academic choices in your opinion?
9. What would you like to achieve in your work with academic choice provision by the end of the school year?
    a. What do you see as your next step?

Final Interview Questions:

1. How would you describe your philosophy of teaching?
2. How would you say it compares to that of your principal, your colleagues?
3. How has our work together met your expectations and been different from them?
4. How would you define AC?
5. Are you still convinced that AC is important for teachers to provide to students? Why?
6. What is AC most useful for? Not useful for?
7. When AC goes well, what is happening?
8. What would you say was your most successful AC this year? Why?
9. Does AC work better for some teachers than others? What types are most likely to be successful? Least?
10. How have you improved as a teacher this year?
11. What do the best teachers do differently from average teachers?

12. What most helped you move toward your goals in teaching with AC? What made it hard?
13. What do you know about using AC now that you didn't know in August?
14. What aspects of AC are most comfortable for you? Least comfortable? Has this changed over the year?
15. Back in the fall looking at the work turned in for the AC science homework you asked, "How do you get kids to be responsible? How do you make them want to do well?" Any insights on that now?
16. You spoke of how AC empowers children. Could you explain more about what you mean by "empower"? (look like, sound like, feel like)
17. How does AC empower?
18. What do you see as your next step in developing your work with AC?

APPENDIX G

PLANNING AND REFLECTION PROTOCOL FOR FACILITATOR AND TEACHER

Planning Session:

1. Teacher presents responses to observations and student interviews from previous session.
2. Teacher presents (a) topic .
   (b) learning objectives
   (c) planned sequence
   (d) ideas for choices
   (e) plans for assessment
   for upcoming weekly lesson incorporating student choices.
3. Teacher presents questions she has for facilitator.
4. Facilitator asks any questions needed to clarify her understanding of teacher's plans and questions.
5. Facilitator responds to teacher's questions and with general feedback.
6. Teacher may finalize plans during meeting (Facilitator keeps notes) or deliver final written plans (see Appendix I) to facilitator when completed after the session.

Reflection Session:

Guiding Questions:

- ❖ How did this session match your vision of the ideal choice lesson?
- ❖ What worked well about this lesson? (concrete examples?)
- ❖ What did not work so well? (concrete examples?)
- ❖ What would you do differently if you could do it over?
- ❖ What questions did this session raise for you?
- ❖ How will this experience affect your planning for next week's choice lesson?

APPENDIX H

STUDENT INTERVIEW QUESTION GUIDE

1. Tell me about the choices you made today in this lesson.
2. Why did you decide to _____?
3. What was the best part about having choice time? The hardest part? Easiest part?
4. What would you say were big choices you had? Smaller choices?
5. What other choices would you like to have?
1. What did your teacher do that helped you (a) make your choice? (b) do your choice work?
2. What did other kids do that helped you (a) make your choice? (b) do your choice work?
3. How could your teacher/other kids be more help to you?
4. Did anything happen today that made choice time especially hard/ great for you?
6. What did you learn when you did your choice work today?
7. How do you know if you've done good work for choice time?
8. How would you grade the choice work you did today? Why?
9. If you could have this same choice time again, what would you do differently?
10. Would you tell me about . . .(depending on observation)
11. Is there anything else you want me to know about your choice time today?

APPENDIX I

LEARNING CYCLES FOR THE FACILITATING RESEARCHER, THE TEACHER, AND THE STUDENTS

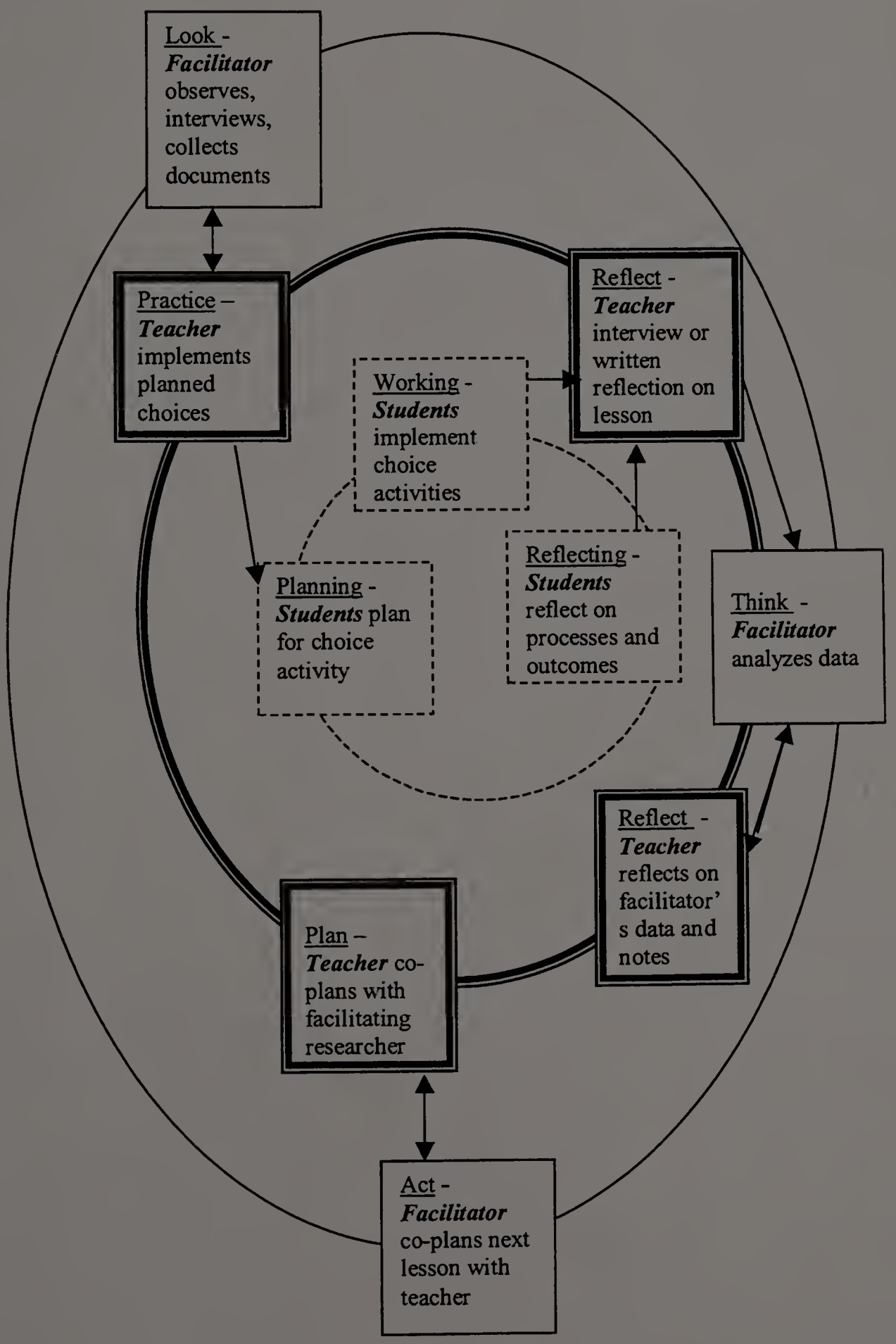


CHART OF FINDINGS FOR OBSERVED LESSONS

Lesson	Choice Focus (Process-Product)	AC Integral or Peripheral	Type of Choice (in reference to Table 1)	Teacher Movement	Primary Teacher Roles	Student Interactions
#1 Math-study guides	Product	Peripheral	Broad/open-ended by plan, Narrow/ Prescribed in practice	Stationary	Instructor Manager	Minimal
# 2 Science	Product	Peripheral	Broad/open-ended	Not Applicable - Homework	Instructor Manager	Minimal
# 3 Math - place Value	Product	Peripheral	Narrow/ Open-ended	Stationary	Instructor Coach, Manager	Moderate
# 4 Science - Change	Product	Peripheral	Broad/Open-ended	Approximately ½ time stationary; ½ time circulating	Manager, Coach Instructor, Facilitator	High
# 5 Science-Rocks and Minerals	Products Process	Both integral (process choices) and peripheral (product choices)	Process choice narrow/prescribed Product choice – broad/open-ended	Circulating	Instructor, Manager Facilitator, Observer	High
# 6 Soc. St. -Mid-Atlantic States	Products Processes	Both integral (product choices) and peripheral (process choices)	Broad/Open-ended	Primarily stationary	Manager Coach, Instructor Facilitator, Observer	High
# 7 Science experiment	Process	Integral	Narrow/Open-ended	Circulating	Manager Instructor	Moderate
# 8 Math - X Practice	Process	Integral	Narrow/Open-ended	½ stationary ½ circulating	Coach, Manager Instructor, Facilitator	High
# 9 Reading Journals	Product	peripheral	Narrow/Open-ended	Not Applicable – small group	Instructor Coach	Minimal
# 10 Soc. St. S.E. US	Process and Product	Integral	Broad/Open-ended	½ stationary ½ circulating	Observer, Coach Manager, Facilitator	High

APPENDIX K

STUDENT GUIDELINES FOR OBSERVED LESSON 10

THE SOUTHEAST REGION

MAP

1. Label class map with name of state and its capital.
2. Five symbols that represent some aspect of your state. You must have at least 2 state products.

INDEX CARDS

1. Your group will be given two large index cards. You are to include as much information about your state as possible. These cards must be neat, legible and attractive.

ESSAY QUESTIONS

You must answer two to the three essay questions. Make sure your answers are complete and full of details.

1. What is your state's nickname? Why do you think that name was given to your state?
2. If your state is located near the ocean or a river, explain the impact the water has on your state. Think about crops grown, population, industry, tourism, etc.
3. Climate is an important factor. What is the climate of your state? How does climate affect crops grown, products produced, transportation, natural resources, job opportunities, and tourism?

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